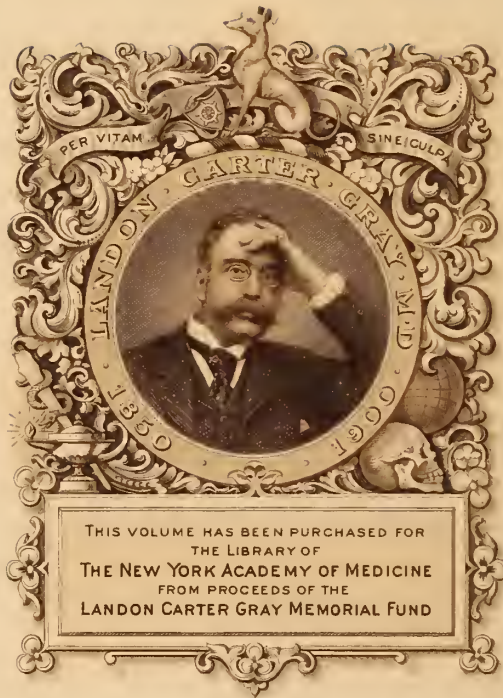




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# CALIFORNIA AND WESTERN MEDICINE

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*Volume XXIV*

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*Number 1*

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# CALIFORNIA AND WESTERN MEDICINE

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No. 1

## NERVE MECHANISMS IN THE PRODUCTION AND TREATMENT OF CERTAIN EDEMAS, AND THE ROLE OF THE ADRENALS IN THE PREVENTIVE EFFECTS OF CERTAIN DRUGS

By P. J. HANZLIK, M. D.

(From the Department of Pharmacology, School of Medicine,  
Stanford University, San Francisco)

### INTRODUCTORY NOTE

Of the many sectors along the battle line between health and ignorance, none is more difficult nor the rewards for intelligent effort more promising than that of pharmacology and biochemistry. We feel that every physician will enjoy and appreciate the advances on that front here chronicled.

In transmitting this fascinatingly interesting essay, Doctor Hanzlik says: "I discuss the bases and practical phases of preventive drugs (many of which have been exaggerated therapeutically) in edema processes, and give an experimental basis for the use of strychnine in treating gross edema without, of course, giving results on patients. The latter I must leave to others for obvious reasons."

Surely the suggestion contained in this last sentence will fall on fertile soil, and in the meantime what an enticing panorama is spread before us from the new vantage point to which Professor Hanzlik leads us.—Editor.

**T**HE importance of a sensory mechanism in the development of chemosis, as indicated by the irregular and contradictory results in the literature, has not been clearly demonstrated. Under controlled conditions, completely negative results have been obtained with mustard oil and dionine. There is no reason to believe that an axone reflex, or a reflex arc (with peripheral synapse) exists and is indispensable to chemosis.

Local anesthetics, and nicotine locally, do not prevent or inhibit chemosis from mustard oil and dionine, but circulatory depression from any cause whatsoever is known to prevent or reduce chemosis and edemas.

On the other hand, favorable though unconfirmed results on human subjects are reported, indicating that the sensory mechanism is essential in the development of mustard dermatitis of the legs, and local anesthesia by infiltration with procaine inhibits the process independently of local vascular changes.

The gross edema in the head and neck regions of rabbits and cats, produced by the administration of paraphenylenediamine, is due to increased vascular (capillary) permeability independently of the sensory and motor nerve mechanisms, axone reflexes, etc., and of a number of other factors.

This gross edema can be prevented by continuous injections of low concentrations of epinephrine and by drugs (strychnine, santalin, picrotoxin, and nicotine) which increase the output of epinephrine from the adrenals.

The possibilities of using strychnine in the prevention and treatment of certain clinical edemas, and other features, are discussed.

**C**LINICALLY, the beneficial effects of certain drugs in inflammations have long been recognized and thought to depend on their actions on sensory nerves, though really on pain or irritability. It is claimed that not only the pain and irritation are ameliorated, but also the hyperemia and edema are diminished, so that the pathological process may be terminated more quickly, as, for instance, after the application of local anesthetics in pharyngitis, rhinitis, etc. With cocaine the vasoconstrictor action must be kept in mind, but vasoconstriction would not explain the beneficial effects of procaine and some other local anesthetics and analgesics. The older clinicians regarded opium, bromides, and chloral as important remedies in the treatment of certain systemic inflammations, including pneumonia, in which opium and morphine were especially advocated (Rosenbach: *Deutsch. Klinik*, 1902, 1:213; *Münch. med. Wochenschr.*, 1906, No. 18,857). Vasoconstrictor action could not be invoked with opium, bromide and the antipyretics, the effect of these drugs on the circulation and vessels being depression, if anything. The view that narcotics and anesthetics possess beneficial effects in various inflammations, through their actions on nerves, was championed especially by Spiess (*Münch. med. Wochenschr.*, 1902, p. 1611; 1906, pp. 365 and 1948; *Arch. f. Laryngol.*, 1919, p. 120). However, Spiess' claims were not supported by controlled clinical or experimental evidence.

Experimental evidence of the beneficial effects of morphine, quinine, cinchophen, salicylate, antipyrine, etc., in chemosis has been reported (discussion in Meyer and Gottlieb; *Experimentelle Pharmakologie*, 4th ed., 1920), and the benefits attributed to central analgesia from these drugs. It is supposed that this basis accounts for the therapeutic results from these agents in laryngitis, bronchitis, rheumatism, pleurisy, and not only as to

relief of pain, but also as to actual abbreviation and inhibition of the pathological processes. A study of the literature of the subject indicates that both the clinical and experimental reports are seriously defective in critical evidence, and that such results as have been obtained may be explained by quite obvious factors, without invoking more complex and less probable mechanisms. My object in this paper is to discuss the basis of the claims made for the importance of nerve mechanisms in edema and inflammatory processes, and the probable explanation of the inhibition of these changes by certain drugs, including a brief summary of some drugs that can inhibit edema by increasing the output of epinephrine from the adrenals.

#### INFLAMMATION AND SENSORY NERVE IRRITATION

Twenty-five years ago Head and Campbell (Brain, 1900, 23:353) showed that the inflammatory changes in the skin of herpes zoster are caused by irritative changes in the dorsal root ganglia. Owing to these changes, abnormal impulses are sent in an efferent direction along the sensory fibers to the skin in areas of distribution of the particular nerves. The actual formation of blisters has never been explained, but the vasodilatation resulting in the hyperemia, or rubefaction, was studied later by Bayliss (J. Physiol., 1900-01, 26:173). Bayliss showed that dilatation of skin vessels occurred during electrical, mechanical, chemical, and thermal stimulation of the cut dorsal nerve roots, with the spinal ganglia intact. The dilatation was unobtainable on direct stimulation of the nerve fibers some time after removal of the ganglia, which resulted in complete degeneration of the peripheral fibers. The vasodilatation still occurred after paralysis of the spinal ganglia by nicotine, and, therefore, independently of these structures. This result indicated that the mechanism of the vascular relaxation was due to passage of impulses along the course of the nerve fibers toward the periphery. The mechanism was not concerned with the sympathetic nerves because the dilator fibers did not pass into the sympathetics, and stimulation of these nerves gave the opposite result, namely, vasoconstriction, resulting in ischemia or anemia. Therefore, it appeared that vascular relaxation, resulting in hyperemia, could be elicited by direct peripheral sensory nerve stimulation. It is conceivable that if the vascular relaxation is maintained long enough, extravasation of fluid would occur, resulting in edema and vesication. However, under conditions of direct nerve stimulation by electrodes, and mechanically, edema and vesication are not obtained, even though the stimulation is kept up. On the other hand, pharmacologically, certain irritants produce edema and blistering readily.

#### CHEMOSIS

This brings us to chemosis, which can be produced readily and conveniently in animals, so that one eye is used for the experiment, and the other one serves as the control. This method has been employed by a number of investigators who have put to test the claims of Spiess and others, with respect to narcotics and anesthetics, the rôle of sensory nerves, etc. The results of Ninian Bruce (Arch.

exp. Path. Pharm., 1910, 63:424), have been extensively quoted. Bruce found that local applications of 10 per cent cocaine and alypin to the conjunctiva prevented the chemosis of mustard oil. Section of the cord, posterior roots and sensory nerves alone did not prevent the chemosis, but complete degeneration, inclusive of the endings, did. The results of Bruce seemed to indicate that sensory nerves were essential to the chemosis, and their paralysis by cocaine and alypin explained the inhibitory action of these local anesthetics. Bruce explained the mechanism of edema formation on the basis of a neurone reflex, the irritation of sensory nerves being caused by the mustard oil. This seemed to bring it in line with Bayliss' mechanism of hyperemia and vasodilatation. Later, Bardy (Skand. Arch. f. Physiol., 1915, 32:198) confirmed the results of Bruce with cocaine, but not with alypin. He adduced evidence which seemed to indicate the presence of still another mechanism, namely, a reflex arc, so that now it seemed there was not only an axone involved, but also a synapse. This explanation was arrived at from the inhibitory action of nicotine, the classic ganglionic poison. Injection of nicotine systemically and locally, and also local application without systemic action, were found by Bardy to inhibit the chemosis. The results of further analysis, essentially along the same lines as, and confirmatory of, those of Bruce, indicated that the mechanism of the mustard chemosis, as also of the nicotine inhibition, was strictly peripheral. From his results, Bardy concluded that a reflex arc, situated peripherally and establishing connections between the sensory nerves and the blood-vessels, was necessary to the development of the chemosis, and that paralysis of the peripheral synapse by the nicotine broke the reflex arc, and this explained the inhibition. Histologically, the structures in the axone reflex of Bruce and in the peripheral reflex arc of Bardy have only a hypothetical existence, and their pharmacological basis, at least, has recently been jeopardized.

The alleged inhibition of the mustard chemosis by local anesthetics has been studied recently by Hirschfelder (Am. J. Physiol., 1924, 75:507), who found that cocaine in 2 to 5 per cent concentrations, and 2 per cent butyn, 4 per cent saligenin and 4 per cent procaine, which do not cause vasoconstriction, did not inhibit the process. All of these agents caused definite local anesthesia, and the local vascular changes by the anesthetics, i. e., some constriction by the cocaine, and relaxation or no change by the saligenin and procaine, were unimportant to the result. However, the marked vasoconstriction of epinephrine inhibited the edema. Hirschfelder emphasized the need of adequate blood pressure in such experiments to obtain the edema. Low blood pressure, or circulatory depression, which may be produced by nicotine and by local anesthetics, may explain the inhibition reported by previous observers. It has been found by Dr. Tainter of our laboratory that the maintenance of adequate blood pressure is very essential to the development of edema systemically. This edema will be discussed later on.

In view of the contradictory reports on mustard chemosis, Dr. Tainter has made observations on the



effects of local anesthetics and of nicotine in rabbits and cats. He found, in agreement with Hirschfelder, that cocaine in 5 per cent concentration, which resulted in local anesthesia, did not prevent mustard chemosis. Cocaine also did not prevent dionine chemosis in animals that responded to the irritant. Nicotine injected locally did not prevent mustard and dionine chemosis. On the contrary, both the cocainized and nicotinized conjunctivas responded with earlier and more marked chemosis than the control conjunctivas of the opposite eyes receiving the irritants alone. Hence, we were forced to conclude that chemosis in rabbits and cats, produced by the local application of mustard oil and dionine, is not inhibited by local anesthetics and nicotine, and, therefore, the importance of sensory nerve endings and peripheral axone and arc reflexes (and the existence of peripheral synapses) for the development of chemosis is doubted.

#### MUSTARD DERMATITIS

On the other hand, local anesthesia has been reported by Breslauer (*Deut. Zeit. f. Chir.*, 1919, 150:50) to prevent mustard dermatitis of human subjects suggesting that the functional integrity of the sensory nerves may be essential to the development of this inflammation. Breslauer's work was done on soldiers who sustained nerve and cord injuries during the World War. Mustard oil was applied to the skin of the lower extremities, using the skin of upper extremities or other portions of the body as controls in cases in which there was complete section of the cord with abolition of sensation in the legs, owing to degeneration and paralysis. In cases in which there was section of the sciatic nerve or plexus on one side that extremity was paralyzed with complete abolition of sensation, and the skin of the other leg with sensation and motor activity intact was used as control. Mustard oil did not cause redness and blistering in legs, with sensation abolished. Infiltration of the skin of healthy legs (sensory nerves intact) with 1 per cent procaine prevented the effects. Curiously, epinephrine caused vasoconstriction in both paralyzed and healthy legs, indicating that the blood-vessels were responsive and that perhaps the sympathetic motor endings derived from fibers which travel with the sensory in the sciatic nerve were not paralyzed. It is possible that the epinephrine acted by constricting smooth muscle of the vessels directly. The interesting differences in vascular response observed by Breslauer were that mustard as an irritant caused vascular relaxation, this being prevented by cocaine and procaine in healthy legs, and absent in legs with nerve degeneration and paralysis, while epinephrine caused vasoconstriction under the same conditions. Moreover, irritation from cold, i. e., freezing with ethyl chloride, caused vasoconstriction followed by vasodilation, but not so the irritation of mustard, which caused vasodilation only. Breslauer concluded in favor of the inhibitory action of local anesthetics in, and of the importance of sensory nerves to, the inflammatory effects of mustard in man. However, the results with infiltration anesthesia of the skin of the legs are not comparable with those of surface anesthesia of the conjunctiva, and confirmation of Breslauer's results is desirable.

#### SYSTEMIC EDEMA FROM PARAPHENYLENEDIAMINE

I now wish to indicate briefly some results with a striking edema of the head and neck (tongue, facial and cervical skin, conjunctiva and vocal cords), produced by the hypodermic or oral administration of paraphenylenediamine in rabbits and cats. Development of changes in this way brings the experimental results in closer relation to certain clinical edemas (herpetic, urticarial, angioneurotic, etc.). The analysis of such an edema might ultimately throw light, not only on certain clinical edemas, but also on the side actions of certain drugs, such as the facial and eyelid swellings and similar idiosyncrasies encountered in certain individuals. The time at my disposal will permit of only a brief summary of two phases of the edema, namely, (1) the mechanism of its formation, and (2) prevention by certain drugs and the adrenals. The conclusions reached are based on results obtained from over four hundred animals employed in a study made by Dr. Tainter during the past three years.

*Mechanism of the Edema*—The location of the edema appears to be nearly specific, for it appears exclusively in the head and neck regions. Briefly, the mechanism was found to consist of a marked increase in vascular permeability (probably capillary) with escape of plasma in the head and neck regions, independently of ganglia and nerves of the autonomic system, the brain, the sensory nerve endings, colloidal inhibition, local acidosis, salivary excretion of the poison and kidney changes. There is an escape of whole plasma, including fibrinogen, into the tissues of the head and neck, and this explains the gelatinous nature of the edema. The circulation in the head and neck must be adequate, for a low blood pressure or circulatory collapse from any cause whatever prevents development of the edema. This explains the inhibition produced by narcotics. The application of, and infiltration with, local anesthetics did not prevent the edema; neither did injections of large doses of calcium. Colloidal dyes escaped readily into the edema areas, and injection of peptone favored the edema, these results being consistent with increased vascular permeability. It was prevented by the continuous injection of epinephrine and can also be stopped by continued electrical stimulation of the sympathetic nerves in the neck, because in these two ways inadequate blood flow to the head supervenes as a result of vasoconstriction. The details of the analysis have been published by Tainter and myself in the *Journal of Pharmacology and Experimental Therapeutics*, 1924, 24:179. The escape of plasma is facilitated by circulatory stimulation caused by the paraphenylenediamine in small and in the beginning with large doses. Hence, this feature is favorable to the prompt production of the edema, which requires only an hour and a half for its development. The circulatory and other actions have been described previously in the *Journal of Industrial Hygiene*, 1923, 4:386:448. According to our analysis, therefore, the systemic edema of paraphenylenediamine is not concerned with nerve mechanisms. It can be prevented in both cats and rabbits by nicotine and some other drugs through a mechanism which, it

is believed, may be of significance for studies of edema in general.

*Prevention by Drugs, and the Adrenals*—Complete inhibition of the edema was first demonstrated by intravenous and subcutaneous injections of nicotine in doses that did not cause paralysis of ganglia. The prophylaxis was successful in about 80 per cent of animals tried, a number surviving permanently. (The lack of success in the remainder is explainable by our recent results.) Among other things, it was ascertained that the inhibition was not brought about through an action on nerves, since destruction and degeneration of all the sensory and motor nerves in the head and neck regions, including the Gasserian ganglion, did not interfere with the inhibitory action of nicotine. Local injections of nicotine aggravated the edema, if anything, and, hence, excluded any hypothetical local synapses as the seat of inhibition. Nicotine exerted no inhibitory influence on the edema of the perfused head and extremities. These and other results indicated that the seat of nicotine inhibition was not peripheral, and, therefore, it was concluded that it must be systemic. The other agent, which was found to inhibit the edema was epinephrine, which, in view of the fact that the dosage of nicotine used was not paralytic for ganglia, suggested that the nicotine inhibition was exerted through the adrenal glands. That is, the nicotine prevented the edema indirectly by increasing the output of epinephrine from the adrenals, an action of nicotine that is well known from the work of several investigators (Elliott, Cannon, Stewart and Rogoff, and others; *lit.*, in Stewart and Rogoff: *J. Pharm. Exp. Therap.*, 1919, 13:183), so that the inhibition was essentially the same as that from continuous injections of epinephrine. The adrenals were found to be indispensable to the nicotine inhibition, because the edema could not be prevented in adrenalectomized cats receiving nicotine. The output of epinephrine must be adequate. In some experiments the output of epinephrine was determined by the cava pocket method of Stewart and Rogoff, but in the majority by the denervated-sensitized pupil of Meltzer, as employed by Shimidzu (*Arch. exp. Path. Pharm.*, 1924, 103:52). Equally interesting and confirmatory results were obtained with strychnine, picrotoxin, and santonin, since these drugs, which also increased the output of epinephrine, also prevented the edema. Thus, the gross edema of paraphenylenediamine was prevented by essentially the same mechanism, presumably by diminished blood flow through the head and neck, however this might be brought about, whether by ligation of vessels to the head, by continued stimulation of cervical sympathetic nerves, by hemorrhage, by fall of blood pressure, or by vasoconstriction from continuous injection of epinephrine, or from drugs which increased the epinephrine output of the adrenals.

The mediation of prevention through the adrenals suggests certain possibilities for studies of edema in general. The converse of the inhibitory mechanism is conceivable, namely, that certain edemas, or at least a predisposition to them, may be caused by impaired function of the adrenal, that is, through diminution of its epinephrine output. One may reasonably ask if a deficiency of epinephrine may

not occur as the result of the injurious action of certain drugs and foods, which cause idiosyncratic responses (edemas, rashes, etc.) in certain individuals. Another possibility is the use of the inhibitory drugs mentioned in this paper in the prevention and treatment of idiosyncratic swellings, urticarias, rashes, etc. Assuming that the response of human is similar to that of animal adrenals, these drugs would offer certain advantages over epinephrine, which is used clinically with some success, namely, that their action would be continuous and prolonged, and they can be administered orally. On the other hand, the degree of action would probably be less than with injected epinephrine. Of the drugs tried, strychnine would be most suitable. The total effective dosage used in our animal experiments ranged from 0.24 to 0.74 mg. per kilo injected subcutaneously in five to eight divided doses. This would make a total dosage of from 14.4 to 44.4 mgms. for a 60 kilo man, hence a certainly toxic and probably convulsant dosage if the total quantity were injected at once. However, by dividing it into several divided doses so as to administer about 5 mgms. or somewhat less at a time over sufficiently long intervals, toxicity probably would not occur. Whether the ordinary therapeutic dose of from 1 to 2 mgms. could augment the epinephrine output in an adult man is not known, but the administration of small doses over long periods might do so and be useful as a prophylactic measure. Clinically, strychnine and caffeine have been used with alleged success in asthma, in which epinephrine is so successful. The beneficial effects of epinephrine in the edema of paraphenylenediamine may be taken as the experimental basis of the action of epinephrine in certain clinical edemas. The details of the study of preventive drugs will be published by Dr. Tainter in the *Journal of Pharmacology and Experimental Therapeutics*.

#### CONCLUSIONS

1. The importance of a sensory mechanism in the development of chemosis, as indicated by the irregular and contradictory results in the literature, has not been clearly demonstrated. Under controlled conditions, completely negative results have been obtained with mustard oil and dionine. There is no reason to believe that an axone reflex, or a reflex arc (with peripheral synapse), exists and is indispensable to chemosis.

2. Local anesthetics, and nicotine locally, do not prevent or inhibit chemosis from mustard oil and dionine, but circulatory depression from any cause whatsoever is known to prevent or reduce chemosis and edemas.

3. On the other hand, favorable though unconfirmed results on human subjects are reported, indicating that the sensory mechanism is essential in the development of mustard dermatitis of the legs, and local anesthesia by infiltration with procaine inhibits the process independently of local vascular changes.

4. The gross edema in the head and neck regions of rabbits and cats produced by the administration of paraphenylenediamine is due to increased vascular (capillary) permeability independently of the



sensory and motor nerve mechanisms, axone reflexes, etc., and of a number of other factors.

5. This gross edema can be prevented by continuous injections of low concentrations of epinephrine and by drugs (strychnine, santonin, picrotoxin, and nicotine) which increase the output of epinephrine from the adrenals.

6. The possibilities of using strychnine in the prevention and treatment of certain clinical edemas, and other features, are discussed.

### REGIONAL ANESTHESIA

By C. E. PHILLIPS, M. D., AND ROY H. JOHNSON, M. D.,  
Los Angeles

*Regional anesthesia to be successful must be carefully studied and practiced.*

*The advantages of regional over general anesthesia are: Less shock; less systemic effects; reduction of respiratory complications; lower mortality rate.*

*Its advantages over local anesthesia are: More complete anesthesia with less anesthetic; greater ease and rapidity of anesthetizing large areas; in abdominal work, both parietal and visceral surfaces are rendered anesthetic; enlargement of the field for local anesthesia.*

DISCUSSION by Mary E. Botsford, San Francisco; Eugene H. Barbera, Oakland; W. A. Shaw, Elko, Nevada; William W. Hutchinson, Los Angeles.

THE chief purposes of an anesthetic are to relieve physical and mental pain. Physical pain, arising from a local interference with a sensory nerve, such as is caused by a surgeon's knife, and mental pain, is the term we apply to the anguish experienced by people who anticipate pain, but who may not be actually in pain.

The ideal anesthetic should possess certain qualities, which are chiefly:

1. Relief of physical pain arising from certain area or areas.
2. Should allay mental pain as we have defined it.
3. Safety. The anesthetic should do no harm to the patient, and should be lasting enough to permit the accomplishment of the ends sought.
4. It should have no subsequent deleterious effects on the patient.

We have no such anesthetic.

Inhalation narcosis is the most common method of inducing anesthesia. It fulfills the first requirement perfectly. It fulfills the second only after the patient is asleep. It does not satisfy the other two requirements satisfactorily in all cases.

In every place where the seriously sick are treated there are a number to whom the administration of an inhalation narcosis jeopardizes their chance of recovery. In this class of persons the use of regional or local anesthesia is advisable where it can be used. Its safety should indicate its employment in a large number of surgical patients.

Regional anesthesia is produced by two different types of procedures—field block and nerve block.

*Field block* is accomplished by encircling the operative field with a wall of anesthetic solution injected into the tissues. *Nerve block* is accomplished by injecting the anesthetic solution into the nerve or in close proximity to a nerve coming from the area to be anesthetized. Regional differs from local

anesthesia, in that the latter has the anesthetic solution injected into the field of operation.

In considering this problem, the first question that arises is: Who shall administer the anesthetic? It must be done by one thoroughly familiar with it. Inhalation narcosis may be administered by the unskilled. Regional anesthesia to be successful requires a thorough familiarity with the technique. Few surgeons have perfected themselves in the technique. Fewer anesthetists have even studied it. If the method is to come to the prominence it apparently deserves, it must be carefully studied and its principles thoroughly mastered by the one who uses it. It will probably be used by the operating surgeon, although there is no reason why the professional anesthetist should not master its principles and make its use extensively available. The regional anesthetist must know the effect and toxicity of the drugs employed; or as has been said, "He should have a thorough knowledge of anatomy, a good training in general surgery, and a complete command of the principles of the method of regional anesthesia."

I shall now consider the subject briefly, as applied to anesthesia of the neck, upper extremities, chest and abdomen, or para vertebral anesthesia. The essentials are:

1. Accurate knowledge of the anatomy of the part, especially of the bony prominences and their relation to nerve trunks and the distribution of the nerves.

2. *Armamentarium*—Instruments should consist of: (a) Dermographic pencil. (b) Syringes: One Luer 2 cc. hypo-syringe with two needles. These needles should be the 20 or 50 m. length and .6 or .7 mm. in diameter. They are used to infiltrate the skin so that the deep injections may be carried out painlessly. Two 12 cc. anesthetic syringes; six infiltrating nerve needles (three of a size and two sizes). Only one size needle is used in a given case, depending on the flesh of the patient. The sizes should be 80 and 100 m. in length and .8 to .9 mm. in diameter. The syringe should be of glass rather than all metal. The metal and glass syringe is preferable because it permits less leakage than the all-glass syringe.

3. The same asepsis is necessary that is required for the operation. *Solutions*: Novocaine in one-half of 1 per cent and 1 per cent solution is used. Adrenalin is added to accentuate and prolong its effect. With the solutions carefully sterilized by boiling, adrenalin is added just before the injection.

*Amount of Anesthetic Solution*—If the one-half of 1 per cent solution is selected, 250 to 300 cc. may be used with safety. If the 1 per cent solution is used, 125 to 150 cc. may be used, while not more than 30 cc. of the 2 per cent solution should be used. Ten drops of 1:1000 adrenalin is added to each 100 cc. of solution, just before injection. The usual maximum dose of 1:1000 adrenalin solution is thirty drops. This should be reduced in children, arteriosclerotic individuals, in hypertension cases, and others less commonly, when one-half dose or less should be given.

With the needles, syringes and solution prepared, the patient is placed on the operation table,

with the side to be anesthetized uppermost. The work may call for a para vertebral cervical block, a para vertebral dorsal block, a para vertebral lumbar block or a para vertebral sacral block or transsacral block, as the last is called. Usually a combination of these is necessary to anesthetize the operative field.

The cervical para vertebral block offers the greatest difficulty. Two routes are offered—the dorsal and the lateral approach. Because of the lack of definite landmarks in the dorsal route, the lateral is usually selected. The dorsal route, passing by the transverse processes, does not incur the risk of injuring the vertebral vessels. On the other hand, there is less chance of finding the nerves and getting a satisfactory anesthesia. If the lateral block is selected, three wheals are raised—one a finger's breadth below the mastoid process, a second over the tubercle of Chassaignac, and a third opposite the superior cornu of the thyroid cartilage. The tips of the transverse processes are located by palpation with the forefinger of the left hand. The right hand passes the needle to the tip of the fourth cervical process, the syringe is connected, and about 5 cc. of a 1 per cent solution is injected; then an equal amount is injected as the needle is withdrawn. Another needle is introduced to the tip of the transverse process just above, and the injection is repeated for the third and second cervical. Care must be taken that the needle strikes the tip of the transverse process. If this is done there is no danger of injuring the vessels. Sub-fascial injections are then made along the posterior margin of the sterno-mastoid muscle, 75 cc. of 1 per cent solution being used.

The brachial plexus is blocked in several ways. The para vertebral injection is here more difficult than the injection of the brachial plexus itself. The plexus may be reached through the axillary route. The infra-clavicular approach is probably preferable. In brief, the patient is placed on the table, with the arm of the side to be injected abducted to the extent of 45 degrees and allowed to hang over the edge of the table. The head is turned toward the opposite side. The tubercle of Chassaignac is palpated, and a mark made on the skin over it with the dermatographic pencil. A point is selected one finger's breadth mesial to the tip of the coracoid process, and another mark made. These two marks indicate the location and direction of the brachial plexus. The infiltrating needle is inserted in the lower mark and made to advance closely under the clavicle toward the tubercle of the sixth cervical vertebra. When the nerve is struck it is usually felt as a pain in the hand, most frequently in the distribution of the ulnar. The injection of 15 cc. of 1 per cent solution is made. The needle is advanced 3 cm., and 15 cc. more of solution is injected.

The anesthesia of the dorsal and lumbar regions constitute the great majority of cases, and is at the same time the most easy to perform. To assist you in grasping the principles, I have made a sketch from Labat's work, showing the nerve course and distribution in the thoracic region. With the fixed bony landmarks present, the injection of nerve roots becomes an exact procedure. The landmarks are the spinous processes, the ribs and the transverse processes. With the patient lying on the side oppo-

site that to be injected, the back is arched by a pillow under the waist-line. By drawing up the knees, the inter-vertebral spaces are opened to a maximum. The twelfth rib is traced to the vertebra, a perpendicular line is dropped 5 cm. down the midline of the back and finds the spinous process of the twelfth dorsal vertebra. The numbers of the vertebra are reckoned from this. The location of the spinous processes are touched with the dermatographic pencil. The area to be anesthetized is mapped out and the nerves supplying this area are to be injected. A line is drawn parallel to the spinous processes and 4 cm. distant, covering the nerves supplying the field of operation. This serves to keep the subsequent injections in line. By keeping them in line, the angles and distances of the injections become uniform and exact. With the patient in the lateral position, the needle is introduced on the 4 cm. line and advanced downward, inward and forward toward the spine, making a 45 degree angle with the surface. The costo-vertebral angle is searched for and found. Remembering the nerve is nearly in the middle of this intercostal space, the needle clears the under edge of the rib at an angle of 45 degrees and passes beyond one-half of 1 cm. If no blood is flowing from the needle, indicating that it is not in a vein, the injection of 5 to 8 cc. of a 1 per cent solution of novocain and adrenalin is begun and distributed about by cautiously moving the point of the needle as the injection is made. The same process is repeated in the lumbar region, except that the transverse processes must be found with the needle and the injection made at an angle of 30 degrees over them instead of under them, as was done in the dorsal region. Instead of going one-half cm. beyond, as in the dorsal region, the needle is passed by the transverse process by 1 cm. The injection is carried out in a fan-shape area, as before mentioned.

For blocking the lumbar and sacral plexuses, the intradural method is much easier, and if carefully performed is probably safe.

In conclusion we may sum up: The advantages of regional over general anesthesia are: (1) Less shock; (2) less systemic effects; (3) reduction of respiratory complications; (4) lower mortality rate.

Its advantages over local anesthesia are: (1) More complete anesthesia with less anesthetic; (2) greater ease and rapidity of anesthetizing large areas; (3) in abdominal work, both parietal and visceral surfaces are rendered anesthetic; (4) enlargement of the field for local anesthesia.

Regional anesthesia, to be successful, must be carefully studied and practiced.

523 West Sixth Street.

#### DISCUSSION

MARY E. BOTSFORD, M. D. (807 Francisco Street, San Francisco)—The comparative merits of general and local anesthesia have been the subject of much discussion, but as there is no one perfect agent or method, safety—the final criterion—demands the adaptation of the anesthetic to the individual case.

Doctors Phillips and Johnson make a strong plea for the use of regional anesthesia rather than inhalation in showing that, while the latter may be administered by the unskilled, the former requires a thorough familiarity with the technic, thus insuring for the patient the safety to be derived from knowledge and experience.

It is to be regretted that specialists in anesthesiology



have not taken up this method. McMechan, the editor of the "Year Book of Anesthesia and Analgesia," has repeatedly advised professional anesthetists to study the administration of local and regional anesthesia, and no doubt the future will see this accomplished.

One advantage to the surgeon, in this combination, is the prevention of delay by the presence of the anesthetist, when it becomes necessary to augment the local anesthesia with general, as, for instance, in many intra-thoracic operations.

EUGENE HOWARD BARBERA, M. D. (Federal Realty Building, Oakland)—It is to be regretted that, generally speaking, we find the surgeons of France, Germany, Italy, and South America becoming more enthusiastic in the art of regional anesthesia than are we of America. This particular field of work calls for exact knowledge of anatomical relations and demands considerable skill. Daily one sees opportunities in the operating-room to apply this particular type of anesthesia, yet the patient is denied this degree of safety because of the operator's inexperience with the method. I most vividly recall the influenza epidemic, at which time a general anesthetic often invited disaster. A surgeon or physician anesthetist skilled in regional anesthesia would have approached these emergency cases with less fear in his heart than we did. One cannot accept this method for all cases, nor should we attempt to carry it out on the neurotic, hypersensitive individual, who most often is best handled under a carefully administered inhalation anesthetic.

Finally, the conclusions of Doctors Phillips and Johnson seem too logical to refute in this present era of surgical endeavor.

W. A. SHAW, M. D. (Pioneer Building, Elko, Nevada)—The paper of Doctors Phillips and Johnson sets forth the advantage of regional anesthesia, as well as very accurately describing the necessary technique.

Nerve block demands special skill, but most surgeons can quite satisfactorily do a field block if they so desire. I feel that the extra trouble involved in administering field or nerve block is responsible for the fact that it is not used more frequently.

In the larger centers where much surgery is done, the specialist in anesthesia should do this sort of work, while in most hospitals where such specialists are not available, in my opinion the surgeon should familiarize himself with the technique and be able to do regional anesthesia.

In the rather large class of patients known as poor surgical risks, regional anesthesia undoubtedly has its field unopposed by any form of general anesthesia, the administration of which would surely increase the danger of any operative procedure.

WILLIAM W. HUTCHINSON, M. D. (Baker-Detwiler Building, Los Angeles)—No one who has the advancement of the science of anesthesiology at heart could help being intensely interested in this paper. The writers have gone into the technique of the procedure with unusual clearness, which makes the paper of exceptional value. That regional anesthesia has its place in surgery cannot be denied by the most enthusiastic proponents of inhalation anesthesia. This fact is proven by its extensive use, especially in Europe, where it has largely supplanted inhalation anesthesia in some of the clinics. It must be remembered, however, that in these clinics the patients are not given the opportunity of choice. The average American with his high-strung nervous system would prefer unconsciousness during a surgical procedure.

On one point I wish to take issue with the writers of the paper. They state, "Inhalation narcosis may be administered by the unskilled." To my mind this is a mistake often made by surgeons. To allow the administration of an inhalation anesthetic, especially nitrous oxide, by an inexperienced or unskilled person is jeopardizing the life of the patient and the surgeon's reputation.

In conclusion, I should urge the specialists in anesthesia to thoroughly familiarize themselves with the technique of regional anesthesia and be prepared to relieve the surgeon of the actual work in the selected cases where this method is indicated. The surgeon is often too busy with his surgical problems to develop the technique and assume the responsibility of the anesthetic.

PHILLIPS AND JOHNSON (closing)—Further study will probably define the field of regional anesthesia. There are certain shortcomings of the method which we believe at present are as follows:

It does not fulfill our second requirement as we have defined it—i. e., it does not allay the mental shock. With the critically ill patients where this type of anesthesia seems to be particularly indicated, the mental element is active only to a minor degree. Within our prescribed limits this objection holds good only to a minor degree.

The second shortcoming of the method we would designate its "uncertainty." Even in the most skillful hands the percentage of failures will approximate 20 per cent. In most instances the lack of success is only partial and the administration of a small amount of inhalation anesthetic will permit a painless completion of the operation. There are still others in which the failure is complete, and these are due to a variety of causes.

In all surgical work the welfare of the patient is paramount, but with other things equal the operator working under a severe nervous tension may not exercise the refinement of judgment displayed under more favorable conditions. In other words, when the uncertainties of the anesthetic are added to the responsibilities of a difficult operation, in the presence of a conscious patient the operator's acumen may be affected. We believe the technical difficulties of the method are too great for it to supplant the general anesthetic, except along certain lines.

In conclusion, we desire to express our appreciation to the gentlemen who have discussed this paper, and to Labat, whose technique we have followed closely in our clinical work.

## CAESAREAN SECTION FOR HEMORRHAGE

By REGINALD KNIGHT SMITH, M. D., *San Francisco*

*The consensus of obstetric opinion has gradually focused to the point of agreement that in only a small percentage of cases of placenta previa is Caesarean section indicated.*

*Of 4002 obstetric cases that passed through my records prior to December 31, 1922, placenta previa—all forms—occurred twenty-eight times, with a maternal mortality of 0 per cent and a fetal mortality of 6 or 21 + per cent.*

DISCUSSION by K. L. Schaupp, *San Francisco*; Martha Welpton, *San Diego*; E. T. Rulison, *Sacramento*.

HEMORRHAGE from the birth canal of the pregnant woman, especially during the latter half of pregnancy, is always the cause of alarm and apprehension to the patient and her family, and it is a danger, in varying degrees, to both mother and child.

To the obstetrician it means an added heavy responsibility and the urgent need for early and correct diagnoses of the causes of the hemorrhage, and the prompt institution of the treatment of the patient.

The first thought in the doctor's mind will be placenta previa with its varying types known as lateral, marginal, and central implantations and his mental picture of the unfavorable prognosis in each when the patient is not aided by obstetric art. The risk to the mother rises from a low percentage in the marginal to inevitable death in the complete form; it decreasing to from 3 to 10 per cent under intelligent obstetric procedures, such as Broxton Hick version and the use of bags, applied either with or without previous rupture of the membranes.

The physician's second thought will be of the so-called accidental hemorrhage, carrying as it does a maternal mortality as high as 95 per cent, and decreasing under competent obstetric care to about 60 per cent. And his third thought will be of the risks to the child in each of these conditions, with a pic-

ture of the chances for its survival under obstetric treatment.

With the advances made in abdominal surgery it was to be expected that the suggestion of Caesarean section for each of these pathological conditions, of which hemorrhage is the outstanding symptom, would be made. Since it was made there has accumulated an unusually large amount of literature in favor of and much against this mode of treatment. This I have no intention of reviewing.

The consensus of obstetric opinion has gradually focused to the point of agreement that in only a small percentage of cases of placenta previa is Caesarean section indicated. This, approximately 5 per cent, includes those with a long rigid os, viable child, pelvic distortion, cardiac disease, or who have other complications in addition to the placenta previa.

Caesarean section should be the method of choice in the treatment, and should be promptly done in almost all cases of accidental hemorrhage.

Facts compiled from published statistics do not show improvement in the mortality rate of mothers from operation for placenta previa; but do show a marked increase in the chances of survival of the child. For accidental hemorrhage there is a marked improvement in the chances for the mother, but no change in the risk to the child.

Of 4002 obstetric cases that passed through my records prior to December 31, 1922, placenta previa—all forms—occurred twenty-eight times, with a maternal mortality of 0 or 0 per cent; and a fetal mortality of 6 or 21 + per cent.

The method of delivery has been: (1) Rupture of membranes only with spontaneous delivery, 5; maternal deaths, 0; and fetal deaths, 1. (2) Bag introduction with or without version, 8; with maternal mortality, 0; fetal mortality, 4. (One child was viable, three non-viable in this group.) (3) Caesarean section, 15, with maternal mortality, 0; fetal mortality, 1. (Child was diagnosed as dead before operation, but mother and family insisted on giving the child the benefit of the doubt, in the hope that we were mistaken in our diagnosis of its death.)

Accidental hemorrhage occurred in twelve patients, with a maternal mortality of 1 or 8.33 per cent, and a fetal mortality of 8 or 66.33 per cent.

The method of treatment of these patients has been: (1) Dilatation of cervix with rupture of membranes and spontaneous or instrumental delivery, 4; maternal mortality, 1 or 25 per cent; and fetal mortality, 2 or 50 per cent. (2) Bags introduced, with either spontaneous, version or instrumental delivery, 2, with maternal mortality, 0 or 0 per cent; and fetal mortality, 2 or 100 per cent. (Both of these cases were directly traumatic at fifth and sixth month of gestation, occurring as result of a jam on street-cars, and were, therefore, non-viable.) (3) Caesarean section, 6, with maternal mortality, 0; and fetal mortality, 4 or 66.66 per cent. The two infants surviving were one full-term child of a mother with a severe heart lesion and in hospital when the hemorrhage began. The other was premature, the hemorrhage developing after a severe muscular effort, the flow of blood slight, and the pain and other symptoms subsiding, the child being delivered a few days later and a small, old clot about

two inches across and adhering to the placenta when it was delivered. In the other four cases there was total separation of the placenta and, therefore, no hope for the child. Hysterectomy was not considered necessary or advisable in any of these patients.

It is not to be forgotten that pregnancies subsequent to Caesarean section are permanently complicated by the presence of a scar in the line of the incision in the uterus, generally necessitating the termination of such pregnancy by another Caesarean section, or exposing the patient and child to the risk of uterine rupture, carrying with it a much larger risk than the spontaneous delivery of a normal labor.

2600 Jackson Street.

#### DISCUSSION

KARL L. SCHAUPP, M. D. (516 Sutter Street, San Francisco)—Doctor Smith has stated the case of Caesarean section for hemorrhage very concisely and clearly. His opinion is particularly valuable because each of this series of four thousand women was delivered by his own hand, and the report is not based upon the clinical work of assistants or students. It is a personal experience.

Smith's conclusions and experiences are in line with my own at the Stanford women's clinic and at the San Francisco Hospital. I agree with him that abdominal section as the means of delivery in placenta previa is rarely necessary, Voorhees' bags being perhaps a greater life-saving measure.

The status of accidental hemorrhage, however, is quite a different matter. As in placenta previa, there are varying degrees of placental separation in placenta ablatio. Very often during the course of the third stage of labor I find evidence of a small area of a separation where clotting has occurred and progress of the separation stopped. At other times during labor, or just before its onset, there is bright bleeding, which is not explained, by low implantation of the placenta. This may be present in such a severe degree that interference may be necessary, but more often the onset of labor or the rupture of the membrane may exert sufficient pressure to check the progress of the separation.

Where placental implantation is in the normal position and external bleeding occurs, we know that the accumulating blood has dissected its way to the external os. Here the child has a good prognosis, for there is usually sufficient placental attachment to insure the nutrition during the balance of the labor. It is not this type, however, where we turn to Caesarean section, unless there are complicating features.

The true, complete premature separation of the normally implanted placenta presents a striking picture, which is perhaps best described by the term "placenta abruptio or apoplexy of the placenta." This implies something sudden and severe, and this implication is well borne out by the symptomatology: Sudden and continuous abdominal pain, increasing in intensity; no relaxation or rhythmic contraction of the uterine muscle; the hard, board-like uterus, painfully tender to palpation; the sense of disaster experienced by the patient, and the sudden onset of shock present a never-to-be-forgotten picture. In such a situation the progress of the separation and bleeding is so sudden and shock so profound, that there is only one thought, namely, to stop the hemorrhage as quickly as possible. If this should occur during labor and the cervix is well dilated or dilatation, delivery by means of version and extraction or by means of forceps may be successful. I have seen only one such case, however, for by far the greater number occur before the onset of labor.

In complete separation, I feel the Caesarean section is always the operation of choice. It is the quickest and safest for the mother. The child here is not to be considered, for fetal life ceased with the separation. Bags are out of the question, because their efficiency depends upon the ability of the uterine muscle to contract, and this function has been lost. Again, the time necessary for dilatation by this means would be far too long. Manual dilatation, while faster, may likewise be too slow and too



uncertain. Version is dangerous because the infiltration of the uterine muscle with blood makes it so friable that there is danger of uterine rupture.

True complete placental separation is rare—so rare, in fact, that in four thousand patients Smith has had I dare say only six, the six upon whom Caesarean section was performed.

MARTHA WELPTON, M. D. (First National Bank Building, San Diego, Calif.)—As Dr. Schaupp has said, Dr. Smith's report is of great value because it is a record of his own personal work. Both Smith and Schaupp have been clear and concise in their presentation.

Three things I wish to emphasize. First, the mother's right to decide on the procedure to be followed. After the physician has discussed with her the probable results of each procedure—non-surgical and surgical—the decision should be left with her. The woman who is not young and who is ready to deliver her first living child will probably insist upon taking all the risk herself in order to insure the life of her child. Second, a woman who has had one Caesarean section and again becomes pregnant has at least six months in which to put herself under the care of a competent obstetrician. When labor begins she can go into the hospital, be under constant supervision, so the worst which can possibly happen will be a second Caesarean section. Third, in a hurried delivery with forceps we should never forget the possible trauma to the child's head.

E. T. RULISON, M. D. (California State Life Building, Sacramento, Calif.)—Doctor Smith's statement that "in only a small percentage of cases of placenta previa is Caesarean section indicated, approximately 5 per cent" is a challenge to the rather numerous obstetrical specialists who are performing Caesarean operations indiscriminately. In this condition, as well as eclampsia, the mortality of the procedure must be considered. Statistics were gathered from a number of small city hospitals a few years ago which indicated that maternal mortality from the Caesarean operation ranges from 10 to 25 per cent. It would seem that the advocates of its wide application in eclampsia and placenta previa have had in mind only the results attainable in their own hands. To my mind the Voorhees bag procedure is the one that should be urged, except in cases with long, rigid os, as the maternal mortality in the hands of the average obstetrician will necessarily be lower. The pathology of placenta ablatio makes the Caesarean section the logical procedure.

I cannot subscribe to Doctor Welpton's statement that the mother has the right to decide the procedure to be followed. Many times a woman pleads for Caesarean because some friend has told of the easy way out that this procedure offers. The judgment of a woman in labor should not be decisive when such a heavy responsibility is resting upon the physician, as obtains in the conditions under discussion.

Neither can I subscribe to Doctor Welpton's second point in regard to safety of the second Caesarean, because it is possible that the woman may pass into less capable hands in the second instance.

**The high cost of sickness** is causing changes. There is a growing demand that this cost be distributed over large population groups. The principle of insurance against sickness is being applied in different ways. In some countries the state system of compulsory insurance has been adopted. Elsewhere, hospital associations and sick benefit societies are, for a small weekly or monthly fee, guaranteeing free care in case of illness. Industrial groups are providing medical hospital care in return for small sums deducted from the wages of employees and supplemented by contributions from the companies. Such developments, which are multiplying rapidly, have a bearing upon the future of the medical profession.—President Vincent of the Rockefeller Foundation, Ohio Medical Journal.

"A Chinaman had wandered from a cook-house in Yellowstone National Park in winter. Looking back over his shoulder, he saw a bear sniffing at his tracks and rapidly gaining on him.

"He called out shrilly, as he began to run: 'You likee my tracks? I makee you some more.'"

## THE DIFFERENTIAL LEUCOCYTE COUNT IN ACUTE INFLAMMATORY CONDITIONS OF SURGICAL IMPORTANCE

By NEWTON EVANS, M. D., AND PHILLIPS J. TUNNELL, M. D., Loma Linda, California

*Impressions gained from the differential leucocyte count are of the greatest importance in surgical and other inflammatory conditions.*

*One of the most important places where help can be gained from the polymorphonuclear differential count is in making initial pre-operative diagnosis in acute appendicitis and its abdominal complications. A failure to make use of this will, in some instances, lead to disaster.*

*Among the most striking exceptions to the general rule is the remarkable rise of the total leucocyte count, with an apparent elevation of the Walker's Index of Resistance, which occurs in many fatal cases of peritonitis and similar inflammatory conditions, within the last few hours before death.*

DISCUSSION by John F. Barrow, Los Angeles; Howard Dignan, San Francisco; Clarence A. Johnson, Los Angeles; Ernest A. Vickers, San Francisco.

OUR purpose in presenting this study is not to try to add any essential facts to the information already available in regard to the meaning of white cell counts in acute infectious conditions. Rather, it is an effort to call to your attention the well-authenticated facts regarding the significance of the leucocyte counts, and to emphasize at least by reiterating their importance.

The available literature makes it evident that the differential leucocyte count is a measure of great importance in the diagnosis and prognosis of acute infectious conditions. In the face of this, the extreme paucity of articles dealing with the subject in the medical literature of the past twenty years is rather surprising; and personal observation as to the lack of appreciation and use of this simple test in the handling of acute surgical conditions by the average surgeon makes it evident that it is not given the attention its importance deserves.

The two ordinary methods of numerical estimation of leucocytes in the circulating blood are: First, the total leucocyte count indicating the total number of white cells in a given volume of blood, expressed as the number per cubic millimeter. This is determined by the use of the diluting pipette and the blood-counting slide. Second, the differential count to determine the relative proportion of the various kinds of white cells in a specimen, expressed as percentages of the different forms, accomplished by observation of a given number of leucocytes in a stained smear of the blood. For the purpose of the present subject, attention is given only to the proportion of the polymorphonuclear leucocytes to the other forms.

Our observation of the methods of handling acute infections of surgical importance in well-regulated hospitals and of the practice of a large proportion of surgeons is that they are largely uninformed as to the meaning and value of the differential count, or at least have forgotten to apply such information if they ever had it, in the treatment of this important class of patients. Speaking from the viewpoint of the clinical pathologist, we have on many occasions been surprised at the great dependence which many surgeons place upon the total leucocyte count in making the initial diagnosis of acute appendicitis.

In the presence of fairly characteristic symptomatology and physical findings, they will call for a total leucocyte count and make their decision depend to a large degree upon the results of such a leucocyte count. To one who has given some study to the relative importance of the differential count, as compared to the total count, this seems a strange and unwise course to pursue.

The fact has been recognized for many years that there is a type of cases (fortunately a comparatively limited group) with acute pyogenic infections, in which, in the face of a severe infection, there is only a moderate increase or perhaps no increase of the total number of leucocytes above the normal average of seven or eight thousand, but in which a differential count will reveal a remarkable preponderance of the polymorphonuclear cells over the other forms of white cells so that, instead of the normal percentage of 60 to 70, the polymorphonuclears will constitute 90 per cent, or even more.

An extensive and systematic study of this subject was first made by Sondern (1905, and subsequently). His conclusions were based on a study of nearly two thousand surgical cases of this type. His chief contentions have been confirmed by all subsequent observers. His principal conclusions may be stated as follows:

1. "The differential leucocyte count is a factor of prime importance in the diagnosis and prognosis of most inflammatory lesions, and with a knowledge of its details the degree of leucocytosis has a significance not appreciated otherwise."

2. The increase in the relative proportion of polymorphonuclear cells in the blood is an indication of the severity of the toxic absorption; that is, of the infectious process.

3. The degree of leucocytosis—that is, the total number of white cells per cubic millimeter of blood—is a measure of the body resistance, or defensive reaction against the infection.

With these principles in mind, their application may be elaborated as follows:

- (a) A high total leucocyte count, with a moderate increase of polymorphonuclears, will indicate a comparatively light infection with good body resistance.

- (b) A high total count, with a correspondingly high polymorphonuclear increase, will indicate a severe infection with good reaction.

- (c) Slight or no total increase, with a marked rise of polymorphonuclear percentage, indicates a severe infection with poor body resistance.

These conclusions have been confirmed and accepted by other observers. Louis B. Wilson, whose conclusions in general are in accordance with Sondern's ideas, points out certain factors which appear as exceptions to the rule. In children the leucocyte counts are recognized as not being so dependable as in older subjects. In moribund patients there may appear some peculiar exceptions. Wilson also pointed out that in acute infections the leucocyte findings are of the greatest significance from the fourth to the eleventh day of the course of the disease.

Gibson, in 1906, formulated a rule as to the nor-

mal relationship between the total increase and the polymorphonuclear increase in the reaction of the body to infection. He set 10,000 as the upper limit of normal total leucocyte count, and 75 per cent as the upper limit of normal polymorphonuclear percentage, and advanced the rule that, with each 1000 increase of total leucocyte count above 10,000, there should be a corresponding increase of 1 per cent in the polymorphonuclear percentage, above 75 per cent. For example, if in a given case of infection the total count is found to be 20,000—that is, 10,000 above the normal 10,000—the polymorphonuclear percentage should be found to be 85 per cent, which is 10 per cent above the normal, 75 per cent.

Walker (1919) elaborated these relationships still further. His ideas are practically in accord with Gibson's, except that he sets the upper limit of normal polymorphonuclear percentage at 70 instead of 75 per cent. Walker also prepared graphic charts intended to exhibit the relationship of the total count to the percentage of polymorphonuclears in infectious conditions, and to show the changes in this relationship from day to day as successive leucocyte counts are made. Since the appearance of Walker's work, it has become quite the usual thing to speak of the numerically expressed relationship of the total count and the polymorphonuclear count as "Walker's Index of Resistance."

A recent case in a hospital, with which we are associated, serves to illustrate in a rather striking way the significance of the differential count as compared with the total leucocyte count, and the danger of putting any large degree of dependence upon the total count only. This patient, a man 26 years old, came into the hospital, presenting rather definite symptoms and physical findings of acute appendicitis. An able surgeon of the hospital staff, after examining the patient, asked for a blood count, stating to the clinical pathologist that if the total leucocyte count should prove not to be abnormal it would be unnecessary to go to the trouble of making a differential count. The total count was made and proved to be 7600. It transpired that at this point a second staff member, who has learned to have much respect for the differential count, insisted that a differential count be made. Such a count was made, and showed 85 per cent of polymorphonuclears. A consultation was held and decision to operate at once agreed upon. At operation the diseased appendix was found to be gangrenous and perforated. The recovery of the patient has been prompt. An intelligent review of the facts of the handling of this case forces the conclusion that the few hours or longer of additional delay which might have followed complete dependence upon the total leucocyte count would certainly have entailed at least an increased hazard for the patient, if not worse.

An acceptance of these hypotheses, if they must be so denominated, will force upon us the conclusion that in making a pre-operative diagnosis of the presence of such an acute inflammatory condition as acute appendicitis, or in trying to determine the degree of severity in a case which is recognized as acute appendicitis, *in order to decide upon the necessity of an immediate operation, the differential count*



is certainly of greater importance than the total count. If the percentage of the polymorphonuclears is a dependable indicator of the presence and degree of severity of the infectious process, it is of greater importance for the surgeon to know as to its presence and severity than it is to be informed as to the quality of the body resistance to the disease process. If the lesion is present, the operation is indicated whether the body is reacting poorly or well.

A very important contribution to this feature of the subject was made by Noehren (1908). He showed, by a careful classification of a rather large series of acute appendicitis cases, in which total and differential leucocyte counts were made, that there was a definite parallelism between the percentages of polymorphonuclears and the severity of the lesion present, the higher percentage corresponding to the more severe condition, such as diffuse and spreading peritonitis and gangrenous appendix; and that in the more simple and less severe lesions the differential counts were lower. On the other hand, his tables show that there is no such definite parallelism between the total leucocyte count and the severity of the case.

In the series of cases which we have studied we have tabulated thirty-one in such a manner as to compare the severity of the lesion with the polymorphonuclear percentage. A study of these thirty-one cases bears out quite fully the conclusions at which Noehren arrived in his statements.

Cabot states that "most subsequent observations have tended to verify Sondern's theory." He further states: "The most virulent and overwhelming infections are apt not to be accompanied by leucocytosis. Thus, for example, the most virulent cases of pneumonia, diphtheria, and general peritonitis often run their courses without leucocytosis."

In Walker's work, extensive observations were made on the white blood count in pneumonias, influenza, empyemas and related conditions. These observations show that the conclusions reached, in regard to appendicitis, peritonitis, and such types of infection met by surgeons, are also applicable here.

#### CONCLUSIONS

First. The study of the cases which we have collected in the preparation of this paper leads us to believe that, in the main, the conclusions of Sondern and those who have corroborated his work are based upon sound principles, and that the impressions gained from the differential leucocyte count are of the greatest importance in surgical and other inflammatory conditions.

Second. One of the most important places where help can be gained from the polymorphonuclear differential count is in making initial pre-operative diagnosis in acute appendicitis and its abdominal complications. A failure to make use of this aid will, in some instances, lead to disaster.

Third. Among the most striking exceptions to the general rule is the remarkable rise of the total leucocyte count with an apparent elevation of the Walker's Index to Resistance, which occurs in many

fatal cases of peritonitis and similar inflammatory conditions, within the last few hours before death.

#### DISCUSSION

JOHN V. BARROW, M. D. (Westlake Professional Building, Los Angeles)—The importance of Doctor Evans' paper cannot be overestimated. We have too little proven knowledge of the behavior of the leucocytes in varying health and disease conditions. All of us have met the particular clinical picture so well described: the low white cell count, the relatively unimportant differential count, and a very grave pathological condition. Through our study of hundreds of protozoan infected patients, we have come to the conclusion that protozoan toxins measurably affect the leucocytes in both total number and in differentiation. The rule in the blood picture in these patients is a depression of white cells to a low normal and a leucopenia. At the same time the polymorphonuclears are reduced toward and below 50 per cent. In the presence of a bacterial infection this picture may change, but the rise in total white cell count will be slightly behind the increase in polynuclear cells. This type of case is not a bad surgical risk, but, on the contrary, usually has an "uneventful recovery" after operative procedure. The colon, and more particularly the caecum, carries the burden of a protozoan infected bowel. For this reason the appendix is often involved in the above type of case. After perforation and before peritonitis has advanced too far, the blood picture in the case cited by Dr. Evans is the one that generally prevails.

HOWARD DIGNAN, M. D. (275 Post Street, San Francisco)—Doctor Evans has given us a very timely summary of the value of the differential leucocyte count. I agree with him that its value is too often overlooked, especially in those cases where the total leucocyte count is low and where the differential is of the most importance. His paper leads us into speculation as to the reason for high leucocyte counts in some acute infections, moderate ones in others and a leucopenia in still another group. Why do the specific toxins in pneumonia stimulate leucocytic production and the toxins of typhoid fever inhibit it?

I believe that in some of the pneumonias, septicemias and peritonitis cases where we find a very low leucocyte count with a high percentage of polymorphonuclears, the reason is not always due to the patient's low resistance, but to perhaps a slightly different toxin elaborated by that specific organism.

I remember our early efforts to increase the leucocyte count in these cases by the production of turpentine abscesses in the abdominal wall and the injection of various irritating solutions intravenously. I do not remember any noticeable benefit being derived from these methods.

When we know more about the nature of these toxins, we will, perhaps, be able to increase the leucocyte count, or decrease it at will. They may then become of great therapeutic value, whereas today their greatest use is for diagnosis.

CLARENCE A. JOHNSON, M. D. (523 West Sixth Street, Los Angeles)—This discussion of white cell enumeration, which Doctor Evans has so ably and kindly brought to our attention, is a principal which I have tried to follow in all the acute surgical cases which have come to my attention. I recall, very distinctly, two patients seen during the last year, with a comparatively low leucocyte count, and on further study, with a second count done, found that the leucocyte count had not increased appreciably, but that the polymorphonuclear percentage count had increased from 78 per cent to 85 per cent in the course of six hours.

I do not see how we can attach more importance to one than the other of these salient points which Evans has brought out as they are both of great importance to us in acute surgical conditions, and I believe that all surgeons should insist on having both these examinations done before opening an abdomen suspected for acute trouble.

ERNST A. VICTORS, M. D. (133 Geary Street, San Francisco)—From my own experience the findings of a high polynuclear cell count with a relatively normal total leucocyte count is not an extreme rarity. I think that

we are all on the lookout—even some surgeons—for these atypical leucocytes. Nor am I so prone to view all such disturbed ratios as indices of failing resistance. We sometimes see the leucocyte picture reversing itself in the course of a disease and assuming no parallel with the rise or depression of resistance.

It is in the early stage of a pyogenic process, when the blood count is of greatest importance, that a discrepancy between the total and polynuclear rise presents its annoying conflict. Doctors Evans and Tunnell rightly emphasize the importance and pus indication of a high polynuclear count, irrespective of a total cell increase, yet these counts are also not infrequently seen when the process does not go on to suppuration.

In non-pyogenic conditions, acute meningitis, pneumonia and erysipelas, the total polynuclear ratio is less uniform than in closed cavity infections. Fortunately they are not as significant. In the resolution stage of a pneumonia, with the fall in total count, but maintenance or elevation of the polynuclear count, the development of an empyema is indicated.

## A NEW TECHNIQUE OF UNMODIFIED BLOOD TRANSFUSION

By LEROY BROOKS, M. D., *San Francisco*

*Technique described and its advantages pointed out.*

DISCUSSION by Leo Eloesser, *San Francisco*; J. F. Cowan, *San Francisco*.

IT IS agreed by the majority of the leading men in the profession that the transfusion of unmodified blood is preferable to the transfusion of citrated blood. The advocates of the latter method have as their strongest point the simplicity of the technique of making the transfer. The method to be described here is a modification of that of Kimpton-Brown.

A short time ago I demonstrated the apparatus used at a meeting of the San Francisco County Medical Society and since that time, about once a week, I have been asked by some physician to give, over the telephone, the details of the technique involved. For this reason I feel that publication of these details will not be out of place.

The apparatus consists of paraffin-coated tubes, needles with obturators, and a pressure suction bulb. The tubes are modifications of the Kimpton-Brown tubes with a capacity of 300 cc. The tip of the tube is ground to fit the hub of the needles, and is the same size as the tip of the 50 cc. Luer.

The needles range in size from gauge 10 to 14, and are equipped with obturators which completely fill the needle, including the hub. The pressure suction bulb blows at one end and sucks at the other, as its name indicates.

Contrary to what has been said by some, the preparation of the tubes is simple. After the tubes have been washed and thoroughly dried, a piece of paraffin (parawax) one cubic inch in size is put in the tube, and the cork inserted and tied securely with a string over the cork and around the tube below the airway. The tube is placed in the autoclave and sterilized. It is then removed and the liquid paraffin allowed to run over the entire surface of the inside of the tube, and the surplus allowed to run out from the airway. By allowing a little of the melted paraffin to escape from the tip of the tube immediately upon removing the same from the autoclave, a thin coating of this tip is insured which does not decrease the bore of its caliber enough to cause difficulty. The top of the tube is

emerged in a basin of hot liquid paraffin, which seals the cork. The tube is then wrapped in two sterile towels and may be used any time up to four weeks after preparation.

The needles and obturators are dry-sterilized and kept in test tubes with a small amount of liquid petrolatum to prevent rusting. Each test tube has a pledget of cotton at the bottom, and only one needle is put in a tube to prevent dulling the points.

This entire process can be carried out in rural districts, using the oven of the ordinary cooking stove instead of the autoclave, and to be sure sterilization has been complete a piece of white gauze should be placed in the oven and the heat continued until the gauze is scorched to a light brown color.

The transfusion may be carried out in the operating room, a hospital room, or at home, and can be performed by one person.

First, a needle is inserted into the vein of the recipient and plugged by the proper obturator, which, because of the perfect fit, completely fills every part of the hollow of the needle, preventing loss of blood or, what is more important, the beginning of a clot in this needle while the blood is being drawn from the donor. Another needle is now inserted in the selected vein of the donor, usually at the elbow, the paraffin-coated tube attached, and by means of the pressure suction bulb, which is attached to the airway of the tube, a vacuum is created and 300 cc. of blood can be collected in the average case in less than one minute. The tourniquet is now released (Tycos blood pressure apparatus at a pressure of about 50 to 90 pounds is the best tourniquet), the tube is disconnected and held tip up and this needle plugged by the proper obturator. The pressure suction bulb is reversed. The obturator is removed from the needle in the recipient's vein, the paraffin tube quickly attached and the blood injected by means of the bulb. It is not necessary to inject it too rapidly; usually from one to two minutes is used. *It is most essential that the pressure bulb be released from the airway just before the last of the blood is injected, to prevent injecting air in the vein of the recipient. This is made easier by not forcing the rubber tube of the bulb too tightly over the airway of the paraffin tube.*

This process can be repeated as often as necessary until the desired amount of blood is given, each time using a fresh paraffin tube.

In a few instances one has to expose the collapsed vessel of the depleted recipient, especially in small children. When this is necessary the vein should be isolated, a ligature passed around it and tied. The vein is then opened above the ligature, a selected needle inserted, and a second ligature tied around the vein and the needle to prevent back-leaking when the blood is injected. With practice, one will find that very few cases require the open incision. It has not been necessary to expose the vein of a donor, but should it be, the procedure is the same, except the point of the needle is directed away from the heart.

The ground tips of the paraffin tubes fit the adapters universally used with large Luer syringes and standard Luer needles. This makes transfusion in infants through the fontanelle simple when a vein large enough to be used is not available. A Gold-



## DISCUSSION

L. ELOESSER, M. D. (Butler Building, San Francisco)—Dr. Brooks' detailed exposition of technique is very welcome. We are all agreed that it is better to transfuse unaltered blood rather than citrated blood. Everyone who has done enough citrate transfusions has got into trouble sooner or later, and unless he is uncommonly stubborn, has forsaken the citrate method. Dr. Brooks' method has the advantage over Kimpton-Brown's of not requiring an incision. In these days of wholesale transfusions and professional donors, this detail is of some importance. Many professional donors stipulate that their veins shall not be cut down upon. I have been satisfied with the Kimpton-Brown method. It is perhaps technically a little easier than Brooks', but that is not the question. If Brooks' satisfies the donor, his is the better.

It may be easier to nick the skin with a cataract knife before trying to insert the needle into the vein. If the needle is not properly inserted, a large hematoma forms which takes several weeks to absorb. Twice I had trouble with the needle and had to forsake it for the Kimpton-Brown tube. Doctor Brooks' series of 178 cases without a failure speaks for itself, however, and is evidence enough of the practicability of his ingenious method.

J. F. COWAN, M. D. (Lane Hospital, San Francisco)—Doctor Brooks has given a clear and concise description of his modification of the Kimpton-Brown method of blood transfusion. The history of blood transfusion is that of a series of endeavors to simplify the technique

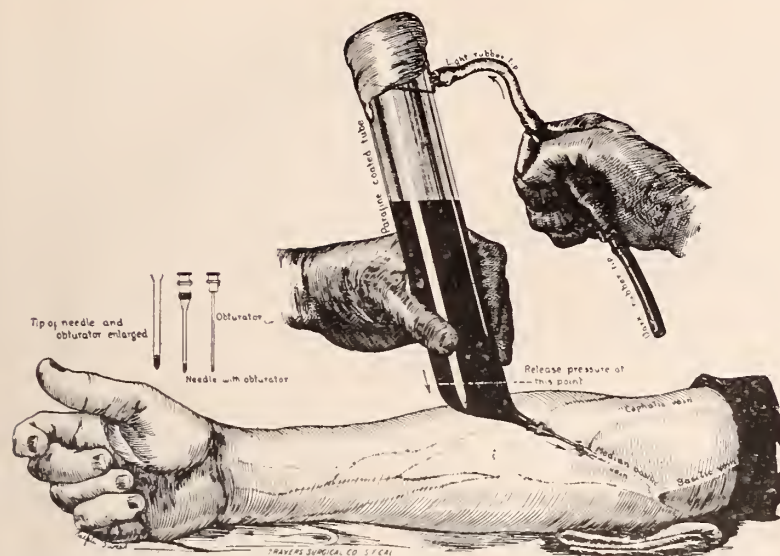


Illustration I. Shows blood being injected into one of the veins at the elbow by means of the paraffine coated tube with special needles which fit the tip. The glass cylinder has a capacity of 300 ccs. (half a pint). The right hand of the operator is shown forcing the blood into the vessel by means of the rubber bulb.

bloom needle is inserted in the superior longitudinal sinus through the anterior fontanelle and the paraffin tube connected to this needle by means of the large Luer adapter. The blood from the donor is collected in the same way, as described above.

To have uniform success, the details must be accurately followed. The needles should be sharpened each time before attempting to insert them into the vein. The needles must be inserted in the veins in a clean-cut fashion.

One should never attempt to enter the vein until the skin has been punctured, because of the danger of going through both walls of the vein. If a hematoma should form, the operator should not proceed with this vein. It is often possible to collect one tube of blood before the pressure of the blood outside the vein collapses its walls, but there is added to the blood, from the injured tissue, enough thrombokinase to cause rapid clotting of the collected blood.

The advantages of this method over that of Kimpton-Brown are apparent, as it is not necessary to expose and destroy the vein of either donor or recipient, an essential when using professional donors. The mechanical injury to which the blood is subjected is reduced to a minimum, as it does not come in contact with any rough surface, such as rubber tubing, etc. The blood is transferred while still warm and before any coagulation changes have taken place, preventing many reactions.

This method has been used by me 178 times, without a failure to transfuse the desired amount of blood. Both grouping and cross-agglutination tests are done as a routine, and out of this number there have been only four reactions.

The advantages of whole blood over that of the citrated blood are well known, and the technique is equally if not more simple, and can be used successfully by anyone who can routinely successfully perform a citrated blood transfusion.

380 Post Street.



Illustration II. It is impossible to insert a needle into the tiny blood vessels in infants because of their small size. The picture illustrates a special needle with the tube connected. The needle is inserted into the fontanel (the soft spot in the top of the head in infants) into a large blood vessel which is always present in this location and the blood is injected here.

of the procedure. Arterio-venous anastomosis required dissection and a master hand for the delicate suturing. The use of various types of cannulae was time-consuming, and coagulation of blood in the cannulae was troublesome. Furthermore, there were no means of direct determination of the quantity of blood given the recipient.

The citrate methods, with the use of syringes or defibrination of blood and its introduction into the vein by the gravity method, eliminated coagulation and gave us a means of measuring the quantity used; but these methods require considerable time and are cumbersome, and reaction is believed to follow the citrate method more frequently. The statement is made that some reaction occurs after 10 per cent of all transfusions and that the percentage is unaffected whether whole or citrated blood is used. Lewisohn investigated the effects in a long series of parallel cases in which different methods were employed, and concluded that the results following the use of citrated blood were as good as any other method. In my experience, reaction has followed the use of the citrate method only. More important, however, than the question of possible reactions following transfusion is the rapidity and ease with which it can be performed. The ease and rapidity with which Brooks performs transfusion with his new technique in the patient's room, with the assistance of one nurse, suggested to me that this was by far the simplest technique that I had ever seen. When I attempted to do the same thing, I concluded that it would be very simple if it were not so difficult to insert the large cannula into the vein. This, however, is a matter of a little practice.

As suggested by Doctor Eloesser, I have found that nicking the skin before trying to insert the cannula is helpful, and it is important to have the end of the cannula sharp. I noticed that Brooks has a sterile hone in his armamentarium for this purpose. Having seen Dr. Brooks perform transfusion, and having used it in several cases myself, I am convinced that his method is practicable. His results certainly confirm his claims.

DOCTOR BROOKS (closing)—The most important single factor is the insertion of the needle into the vein in a clean-cut manner. One cannot escape the fact that practice helps in this connection.

Doctors Eloesser and Cowan have both spoken of nicking the skin with a cataract knife and inserting the needle through this point. This is, I believe, a very good suggestion, especially if the needles on the market are used as they are offered. I have not found this necessary, however, because I have my needles sharpened so that the point and the edges of the bevel present a very sharp cutting edge. This makes the insertion of the needle through the skin very easy and practically painless. One should not attempt to enter the vein until after the skin has first been definitely punctured. This is made easier by retracting the skin over the vein slightly to one side to make the puncture.

Since this paper was sent to the editor, I have had thirty-eight additional transfusions, without a single reaction. I am frequently asked as to where the tubes and needles may be had. They are handled by Travers Surgical Company in San Francisco.

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To have had an operation of some kind is an asset to the modest entertainer, to have had an operation requiring the patient to be two hours under the anesthetic is a superior asset and entitles the sufferer, or beneficiary, as the case may be, to a certain amount of recognition; but to have been miraculously healed of some real and indescribable, or imaginary ailment is the superlative asset and assures the favored one of the envy of all her friends.—Editorial, Journal Kansas Medical Society.

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In its proper sense, reading is a process involving the exercise of the intellect. It is not a passive method of infiltration; it is an active mental function, during which the mind constantly reacts to impulses gathered from the page, bringing into play the qualities of judgment, analysis, a score of others.—O. J. Lewis (Saturday Review).

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You know who the critics are? The men who have failed.—Disraeli.

## THE TREATMENT OF HERPES ZOSTER

By HARRY P. JACOBSON, M. D., Los Angeles,  
(From the Department of Dermatology, Los Angeles  
General Hospital)

*This study is based upon a series of twelve cases of herpes zoster treated successfully by red light.*

*An important feature worthy of mention in connection with this treatment is the absolute arrest of the disease process and its extension when treatment is begun early.*

*The employment of red light in the treatment of zoster lesions seems to prevent suppuration in early cases, hastens crusting and resolution in suppurative cases and prevents deep scarring in all patients, no matter how severe the eruption.*

*Exposure of the segment of the spine corresponding to the region of the affected posterior root ganglia to the red light seems to alleviate the associated neuralgic pain, which is such an annoying symptom in herpes zoster.*

DISCUSSED by E. K. Stratton, M. D., San Francisco;  
F. C. Nichols, M. D., Los Angeles; W. J. Stone, M. D.,  
Pasadena; H. E. Alderson, M. D., San Francisco.

THE purpose of this communication is to register some observations on the efficacy of red light in the treatment of herpes zoster. My attention was attracted to this method of treatment by H. Edward Ohlswede (Arch. of Derm. & Syph., October, 1923). That author extols the virtues of red light in the treatment of various dermatoses, and presents a number of case histories in support of his enthusiasm. Quoting Finsen and many other recognized authorities on the subject as a background, he advances the theory that, in view of the directly antagonistic positions that the red and ultra-violet rays occupy in the scheme of the spectrum, the therapeutic effects of these two agencies must necessarily also be antagonistic in character. Thus, while the ultra-violet rays, when employed for therapeutic purposes, provoke hyperemia and inflammation, the red rays when employed similarly should allay inflammation—one type of ray counteracting the effects of the other.

With the above plausible considerations as an incentive before me, I decided to give this method a trial and chose herpes zoster for the purpose.

Herpes zoster is distinctly an acute inflammatory disease and, in accordance with the above theoretical reflections, should react favorably to the application of the red rays; and while in the absence of complications this disease process is self-limited, frequently, and especially in the aged and the infirm, traumatism or secondary infection are superimposed, and then the condition assumes a more serious aspect, taxing our therapeutic resources to the limit, in a vain effort at alleviating the suffering of the patient. As an illustration of what the red light will accomplish in these complicated cases, the following case histories will serve as examples:

CASE No. 1—Male, American 60 years old, hotel clerk, sustained an injury to his back through a fall September 26, 1923. Two days following that accident he developed severe neuralgic pain on the right side of the body in the dorsolumbar region anteriorly and posteriorly. About twenty-four hours after the onset of pain a vesiculo-papular eruption made its appearance in that region. Gradually, in spite of intelligent and diligent treatment at the hands of the family physician, the condition grew progressively worse. The herpetic lesions became secondarily infected and caused the patient a good deal of discomfort and pain.

On October 27, I saw this patient with Dr. Stoner.



There was an area of infiltration on the right side of the patient's body corresponding to the region supplied by the sixth to the tenth dorsal nerves. This infiltrated area was studded with numerous sluggish ulcers arranged in groups which were fairly deep in extent and contained a sero-purulent exudate. In spite of the condition having endured more than four weeks, there was no evidence of healing.

The treatment instituted consisted of exposure of the lesions to the red light daily for a period of twenty minutes at a distance of 24 inches from the focus of the ray. After five such exposures, the patient was discharged as completely cured.

CASE No. 2—Male, 69 years of age. Referred to me by the out-patient department of the Los Angeles County Hospital August 12, 1924, and discharged as cured August 16, 1924.

His present illness commenced with a stinging and burning sensation on the right side of the body about sixteen days prior to his first visit to the office. Two days following the onset of pain a papulo-vesicular eruption appeared in the back and front in the region of the liver. Since that time various remedies had been tried, and in spite of all efforts the condition had grown progressively worse. He complained of having lost 19 pounds in weight since the onset of the trouble, due to sleepless nights, and volunteered the information that unless relief was afforded him soon by medical means he would do something desperate.

Examination showed involvement similar to that of the first patient. There was an infiltrated area in the same region and approximately of the same extent as in the first patient, except that the ulcerations seemed to have been more numerous. As in the first case, the lesions were exposed to the red light daily for twenty minutes and on the fifth visit the patient was discharged as clinically cured.

Here we have an example of herpes zoster complicated by secondary infections in patients of fairly advanced age and below par physically. When presenting themselves for treatment the condition in one patient had endured four weeks, and in the other patient sixteen days. There was no evidence of improvement subjectively or objectively in either case, in spite of intelligent and diligent medical care. Five exposures to the red light on five successive days for twenty-minute periods accomplished a clinical cure in both cases, except that one of these patients complained of some post-herpetic pain at the time of discharge.

In addition to the cases cited, ten others were treated successfully by the same method. In this group there were seven males and three female patients, in ages ranging from 9 to 70 years. The duration of the disease at the time the red light treatment was begun averaged five days. The eruption was situated on the trunk in five patients, involving the region supplied by the sixth to the tenth dorsal nerves in four, and in the fifth the pectoral region alone was implicated. One patient had an involvement of the gluteal region and the lower abdominal quadrant on the right side. In one there was an extensive involvement of the neck, chest, shoulder and arm, and in another the neck only was involved. There was one case of supra-orbital zoster, and another patient presented lesions on both lips and right cheek. The number of treatments required for a clinical cure in these patients varied from two to six.

#### ANALYSIS

This study is based upon a series of twelve cases of herpes zoster treated successfully by red light.

The most striking feature noted in the treatment was the rapid involution of the lesions, usually beginning after the first exposure to the light. As already indicated above, the process of complete involution is accomplished in a period of two to six days, depending upon the severity and extent of the involvement, and consists of a desiccation of the contents of the vesicles with a conversion of the inflammatory products into thin, loosely adherent crusts which separate and fall off easily.

An important feature worthy of mention in connection with this treatment is the absolute arrest of the disease process and its extension when treatment is begun early. This fact was demonstrated, to my satisfaction, by two patients in this series—one who presented herself with an early zoster with only two groups of lesions on the neck, with evidence of more lesions in the process of evolution, and the other with a pectoral involvement—also an early case. Institution of early treatment in both of these patients apparently prevented an extension of the disease process, and reduced the required number of treatments to two in accomplishing a clinical cure.

One more point which should be emphasized in recommending this method in the treatment of herpes zoster is the absence of deep scarring and pigmentation, so common following the treatment of severe cases by other methods, and so uniformly absent in even the most extensive cases treated by the red light. This feature becomes of especial importance when the patient happens to be a female with involvement of some exposed part of the body. There was one such case in this series—the wife of a physician, very prominent socially, who had a severe and extensive involvement of the neck and upper part of the chest, shoulder and arm, and who presented herself for treatment about six days after the lesions were fully developed. Fortunately, the skin lesions involuted completely in five days, though the patient continued to suffer from post-herpetic pain for some time after their disappearance.

#### TECHNIQUE

The technique of the treatment is very simple. The patient undresses, and the affected part is exposed to the red light for a period of twenty minutes at a distance of twenty-four inches from the focus. The source of light consists of a thousand-watt red globe, so adjusted that its rays will strike the lesions in a perpendicular direction. These exposures are repeated daily until the lesions are completely involuted. It is also advisable to expose the spinal column in the region of the seat of the trouble to the rays of light for the immediate sedative effect which this treatment exercises.

#### OTHER METHODS OF TREATMENT

That the more usual methods of treatment of herpes zoster are not entirely satisfactory, may be judged from the variety of remedial agents ordinarily employed. These include internal as well as external remedies, and comprise ointments, lotions, pastes, cuppings, plasters, ethyl chloride sprays, opiates, and other narcotics and various electric currents, such as the galvanic faradic, high frequency, and the roentgen ray.

One recent therapeutic suggestion employed with

success by its author is offered by Howard Fox. It consists of an occlusion paraffine dressing applied by means of an atomizer. Fox has reported a series of seventeen patients treated by this method with uniform success. It is quite obvious, however, that even this method, though satisfactory as far as ultimate results are concerned, is not as attractive in its application as might be desired. It entails the use of oil, cotton, bandages, thus adding discomfort to the already existing misery of the patient. The objectionable features are entirely obviated by the use of the red light.

But it may be asked whether our judgment may not be biased in favor of red light, since it is natural to become enthusiastic about anything in which one is especially interested. To meet any criticism of the sort, I shall cite a few historical facts dealing with the subject and, if possible, indicate the wide favor that this remedy has enjoyed at the hands of prominent physicians, even centuries ago.

#### HISTORICAL

As early as the fourteenth century the application of the principle of photo-therapy was practiced on the son of King Edward I, who was suffering from smallpox. He was treated by being placed in bed, covered with scarlet blankets, and with scarlet hangings covering the walls of the room; gargling his throat with mulberry wine, and sucking the juice of red pomegranates. He recovered completely from the attack, without any trace of the disease remaining in evidence.

Also in the time of Queen Elizabeth the value of red curtains, red coverlets, and red glass about the bed of smallpox patients was loudly proclaimed by certain physicians.

In more recent times many instances of the empirical but successful employment of red light in the treatment of the exanthemata and in other dermatoses are recorded in the literature. In 1893 there was an epidemic of smallpox in Norway, and Lindholm used the red light to good advantage. In describing the results obtained by the use of red light in smallpox, his assistant, Svendsen, says: "The period of suppuration, the most dangerous and most painful stage of smallpox, did not appear; there was no elevation of temperature and no edema. The patients entered the stage of convalescence immediately after the stage of vesiculation. The hideous scars were avoided. In the same year George H. Fox, in this country, made a study of the effects of red light on smallpox. The method was tried on a few cases only in the Riverside Hospital, New York, under the direction of Cyrus Edson. The results were entirely negative.

In 1895 Finsen collected reports from a number of physicians in different European countries who have treated smallpox by means of red light. The total number of cases so treated were seventy, with complete success in sixty-nine. Based upon these results and a series of original experiments, Finsen attempted to give the practice of photo-therapy a scientific explanation, and formulated a set of guiding rules for the treatment of smallpox by this method. In 1897 Montague L. B. Rood, surgeon in the British Royal Navy, used the red light in the

treatment of smallpox, with results surpassing his highest expectations. In 1903 Jay F. Schamberg tried the red light method on two cases of smallpox with completely negative results. In publishing these negative results the author utilizes the occasion for a criticism of Finsen's explanation of the action of the red light in smallpox.

In the same year (ten years since Finsen's first advocacy of red light as a therapeutic agent in smallpox) Finsen published the results of a large series of cases of smallpox treated by red light by twenty physicians in different European countries, with uniform success in all of them.

There are, in addition, many other reports on record of the value of red light in smallpox. While some of these reports minimize the value of this method, the consensus of opinion is, that the employment of this agency in the treatment of this disease results in the total or partial suppression of suppuration and its concomitant fever and the absence of scarring.

Assuming that the reported observations are reliable, it appears that, in view of the similarity of the pathological process in herpes and smallpox, there should be a similar reaction to a common therapeutic agent in both conditions.

From the meager experience afforded by the twelve cases of zoster in this series, I am prepared to corroborate the observations recorded in the literature by the above-mentioned workers. The employment of red light in the treatment of zoster lesions seems to prevent suppuration in early cases, hastens crusting and resolution in suppurative cases and prevents deep scarring in all patients, no matter how severe the eruption. In addition, the exposure of the segment of the spine, corresponding to the region of the affected posterior root ganglia to the red light, seems to alleviate the associated neuralgic pain, which is such an annoying symptom in herpes zoster. These salutary effects are apparently produced by a direct action of the red frequency upon the seat of the disease process. This ray, whose wave length is the longest of any in the visible spectrum, penetrates deeply to the inflammatory process, re-establishing there the circulatory equilibrium, stimulates the cellular elements concerned in the disposal of the inflammatory and hemorrhagic products, and hastens resolution.

#### SUMMARY AND CONCLUSION

1. A series of twelve cases of herpes zoster treated successfully by the red light is reported.

2. The advantages of the treatment consist of the simplicity of the method, the rapid involution of the lesions, the prevention of secondary infection, and elimination of post-herpetic scarring and pigmentation.

3. While in most cases the employment of this remedy stops the pain permanently, in two cases of this series the patients complained of pain after disappearance of the lesions. Intravenous administration of sodium iodide in small doses to one patient soon stopped this annoying symptom permanently.

4. A partial review of the literature on the subject is submitted, containing evidence of the successful application of the principle of red light in the



treatment of smallpox as far back as the fourteenth century.

5. A possible explanation of the *modus operandi* of the action of this ray is offered, and is based upon the belief that this frequency of the spectrum penetrates to the seat of the pathology in these cases, where it acts as a cellular stimulant and nutrient and equalizes the circulatory imbalance.

6. It is admitted that the number of cases here recorded is entirely inadequate from which to draw absolute deductions. However, we feel that the evidence so far adduced is sufficient to justify its further employment, not only in herpes zoster, but in other allied pathological skin processes, with prospects of success.

I desire to express my gratitude to Doctor A. Davidson, consulting dermatologist, Los Angeles General Hospital, for his help and suggestions in the preparation of this paper. Also to Emil E. Bogen of the out-patient department for his valuable aid and selection of the cases of herpes zoster, and for many other kindnesses in connection with this publication.

1016 South Alvarado Street.

#### DISCUSSION

ERNEST K. STRATTON, M.D. (350 Post Street, San Francisco)—Until the actual cause of herpes zoster is known, the treatment must necessarily be symptomatic and palliative. I believe that the local treatment should be as simple as possible, opening the larger vesicles and applying an aseptic powder in order to favor desiccation. Wet dressings and ointments should be avoided, as they only serve to favor infection, which leads to ulceration and scar formation. Jacobson's experience with the red light therapy is very interesting and, in view of his brilliant results, we should bear in mind this means of therapy in handling any stubborn or complicated case of herpes zoster. Butler found that the quantity of energy which could be absorbed by the skin was much greater with the visible red ray, which has a wave length of 7000 Angstrom units, than with the invisible, explaining the difference in absorptions to the special faculty which the coloring matter of the blood possesses for absorbing luminous radiations; consequently the heat reaching the deeper structures by conduction is much more intense in the case of luminous irradiations.

FRED C. NICHOLS, M.D. (1136 West Sixth Street, Los Angeles)—It is interesting to note the good response that the doctor has experienced in the use of the red ray. Herpes zoster is generally conceded to be an infectious process, more or less self-limited in its course, and anything that can be done to relieve the patient should be welcomed with both arms. The simple cases where there is no secondary infection we have found to respond very kindly to paraffin dressings, as suggested by Howard Fox. The pain is almost instantly relieved and enervation takes place in a very few days. The cases which carry a secondary infection to any great extent do not respond so kindly to the paraffin applications. The galvanic current, applied two or three times daily along with soothing protective dressings, usually affords great relief. In the severe type of cases, as cited by Jacobson, the therapy has been especially unsatisfactory, and his suggestions as to the use of the red light should be given the highest consideration.

WILLARD J. STONE, M.D. (Security Building, Pasadena)—I have always regarded herpes zoster as a cutaneous trophic manifestation of a neuritis involving the larger or smaller nerves supplying the area involved. The lesions commonly become inflammatory because of the lowered tissue resistance and the presence always in the hair follicles and sweat ducts of the staphylococcus albus. The surmise that the red rays of the spectrum are desiccating and soothing in character, as opposed to

the hyperemic and stimulating effects of the ultra-violet ray, seems borne out by the results secured by Jacobson. The method employed by him is decidedly worthy of further trial.

HARRY E. ALDERSON, M.D. (490 Post Street, San Francisco)—Jacobson has presented a subject that is becoming more important with our increasing knowledge of photo-sensitiveness of the skin. Histopathological studies now under way may produce valuable information on this subject. There is so much in the literature promoted by commercial concerns interested in the sale of various kinds of lights, that soon we may have all the colors of the rainbow represented. But the red light and the ultra-violet rays have been proven to have definite effects on the skin. So a paper of this sort is worthy of our serious consideration.

I have had no personal experience with the red light, so the report of these cases interests me very much. Records of a larger number, of course, would be most desirable. These few experiences, however, are suggestive. The light seems to have its main effect on the skin lesions in the direction of preventing or clearing up secondary infections. This same object can be accomplished by judicious applications of carbon tetrachloride C. P., followed by a protective lotion containing a powder in suspension. Oily preparations are apt to make the local condition worse. At Stanford recently we have been giving suberythema doses of the x-ray with good effect, particularly in ameliorating the pain that accompanies and follows zoster. The local application of the galvanic current in some cases will have a very good effect on the neuritis.

By our local treatment we should endeavor to dry, keep sterile, and protect the skin lesions. If the red light will do the former, which seems possible, protection may be obtained by using a lime water lotion containing 1 per cent phenol and 10 per cent zinc oxide.

DOCTOR JACOBSON (closing)—I do not know of anything that I might add to the discussion, except to express my appreciation to the discussants for the fair attitude that they have shown in commenting upon the subject matter presented. Of course, it would be unreasonable to expect earnest scientific workers to enthusiastically accept a new therapeutic agent (or shall I say an old neglected remedy) unconditionally and without reservations.

Indeed, I am fully aware that the most that could be expected, in view of the small series of cases herewith reported, would be to stimulate interest in this subject matter to a more thorough and comprehensive study on a larger scale than heretofore. If I have succeeded in accomplishing that much through this paper, I shall indeed feel amply compensated.

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By diagnosis we mean a thorough knowledge of the human being that we study. Diagnosis is, therefore, an ideal which we attempt to approach, the acquisition of complete knowledge regarding any living organism being beyond our powers. More particularly, in medical diagnosis we strive to ascertain in how far a given human being is healthy or ill and the reasons therefor, by which in turn we mean in how far he is (as a whole and in each of his parts) capable or incapable of making adequate responses to the physical and psychical influences of the environment in which he lives, and why. Adequacy of responsivity indicates health, whereas inadequacy of responsivity indicates disease or anomaly. Health and disease are conditioned; it is the task of diagnosis to attempt to determine the conditioning factors in given instances.—L. F. Barker (New York Journal Medicine).

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In spite of progress in certain school districts, the problem facing school administrators today is to find effective means of removing the handicap of defective vision of one-eighth of the 24,000,000 school children.

This is important, not only to secure greater efficiency in acquiring an education, but to conserve vision for greater usefulness in adult life and in old age.—National Committee for the Prevention of Blindness.

## INTESTINAL PROTOZOA IN GENERAL PRACTICE

By ALFRED C. REED, M. D., *San Francisco*

*Three general groups of protozoa are seen by the practicing physician. These are the ciliates, the flagellates, and the amebas.*

*It is hard to believe that any of these organisms can live and multiply in the human host, without the possibility of their parasite-host balance being at times disturbed and symptoms resulting.*

*Diagnosis rests on one fact alone, the competent observation of active or cyst forms in the stools. I do not believe that any symptom or syndrome is pathognomonic, and when we recall the possible methods of symptom production, it seems that a pathognomonic syndrome could not possibly occur.*

*In the case of all the amebas we are having good results with a treatment consisting essentially of emetin and neosalvarsan.*

*Emetin is a dangerous and powerful drug, in its action often producing mild toxic symptoms.*

*There is a similarity in symptoms between emetin poisoning and some forms of beriberi, in the presence of peripheral neuritis, weakness, weak heart, lowered blood pressure, and edema. The pharmacology of emetin needs more investigation.*

*DISCUSSION by Otto Barkan, San Francisco; Leonard W. Ely, San Francisco; Harry A. Wyckoff, San Francisco; John P. Barrow, Los Angeles; Clarence G. Toland, Los Angeles; Edward F. Stadtherr, San Francisco.*

I KNOW from experience that many physicians, especially those doing general practice, consider the subject of intestinal protozoa, not only foreign to them and their work, but secretly feel that it is remarkably dry and uninteresting. To these men this paper is directed, in the hope that avoidance of technical handling and emphasis on clinical values may develop an appreciation of this decidedly new line of medical endeavor. Not that parasitology and the intestinal protozoa are in any sense a new field medically, but rather that the present decade is demonstrating a new clinical usefulness going hand in hand with increasing knowledge in these lines.

### WHAT ARE THE INTESTINAL PROTOZOA

It is probable that shortly after man began his evolutionary journey his intestinal tract became the habitat of various protozoa. The protozoa have accommodated themselves handily to the changing food habits and customs of man, and have now apparently arrived at a stage where they have certain striking physiological differences from similar organisms which have not acclimated themselves through these many generations in the intestine of man. We find, therefore, that in general the intestinal protozoa of man cannot be cultivated or grown in other animals, and that laboratory culture also in most cases is difficult or impossible. The few exceptions to this formulation are striking proofs of the rule. The dysenteric ameba, for instance, can be introduced into kittens and into certain monkeys, but it does not find a congenial host or a permanent home, and either kills its host in short order or itself disappears.

Not only have these organisms accustomed themselves for many centuries to life in man, but they have developed an independence of action and completeness of life which are ordinarily not associated

with animals of their primitive and rather simple construction. It is misleading to call them "protozoa," meaning thereby simply single-celled animals. It is biologically correct, but clinically undesirable. We can better assume them to be independent, fully developed organisms which have not been subdivided into more than one cell. We can then appreciate their ability to carry on all the functions of life and their possibilities as producers of disease. They are unit organisms which cannot even be counted purely as parasites. Since their individual life, their reproduction and extension to new hosts is best carried on when they do not kill the host in which they live, we must recognize that they thrive best when they do the least damage to their host. This proposition is the basis of our present understanding of the relation of entozoa to host, a subject which will be developed a little later.

### VARIETIES SEEN CLINICALLY

Three general groups of protozoa are seen by the practicing physician. These are the ciliates, the flagellates, and the amebas.

*Ciliates*—Only one member of this group deserves notice at present, and that is the balantidium, the largest of the intestinal protozoa and easily identified by its hairy or ciliary coating of fine hairs by whose wave-like motion the organism moves rapidly about.

The native habitat of balantidium seems to be in the pig, and its human incidence is related to some association between pigs and man. Monkeys have been parasitized. Balantidium has a similarity clinically to entameba histolytica, in that both invade the mucosa and submucosa of the large intestine and may produce no symptoms during long periods of time. However, the ulcerations at any time may result in a true dysentery and the parasite is always a dangerous guest to have on the premises. We are not sure whether it always invades the tissues of its human host or whether at times it lives only on the intestinal contents. It is known that they may invade the intestinal wall and progress as far as the blood and lymph vessels, and even the lymph glands in the near vicinity. There is no inherent reason, therefore, why they should not be carried to any part of the body. Treatment of balantidium infection is most unsatisfactory and difficult, and requires the use of a variety of medicaments by mouth and local irrigation, as no specific is known.

### FLAGELLATES

1. *Giardia intestinalis*, earlier known as lamblia. This is a small organism having four pairs of flagella or tails, actively motile and living in the upper small intestine, bile tract, and in the stomach when acidity is low. Because of its high location in the intestinal tube, its cysts are more apt to be seen in the stools than are the active forms. It has a sucking disc, by means of which it is attached to the mucosa, and it can penetrate gland ducts. A deep point of infection in bile tract or intestinal wall may often be the source of reinfection or more extended infection of the small intestine. It is transferred to new hosts by carriage of



cysts, probably chiefly through contaminated food and drink. While it is perhaps more widely distributed in the tropics, it is found generally throughout the earth, and is frequently seen in California and the United States. It has been suggested that a higher incidence in children may mean that it is a self-limited disease, but the evidence is not yet clear. The symptoms usually recognized in its presence are of a diarrheal nature, but certain cases simulate duodenal ulcer with remarkable fidelity. Symptomatology beyond this will be discussed later.

2. *Chilomastix*. This is the second flagellate, in point of clinical importance. Much has been written as to its pathogenicity, and this point will be discussed a little later. The organism lives in the lower small intestine, and probably to some extent in the upper colon. It is characterized by lemon-shaped, glycogen-containing cysts, and the active forms have three anterior flagella.

3. *Trichomonas*. Many organisms of this group have been described and in general they are less common and perhaps less important. They have four or five flagella and live chiefly in the colon. They are frequently found associated with phagendic lesions of various parts of the body. We have recently had under observation two cases of vaginal and vulval inflammation, in which trichomonads swarmed in huge numbers. In one of these patients there was also a stomatitis and ulcerative angina of the fauces, in which these organisms were likewise abundant. Their pathogenic relation to such lesions is very uncertain.

#### AMEBAS

1. *Entamoeba coli*. This is a frequent parasite, in our experience, and is often associated with the more dangerous *E. histolytica*. It is characterized by its cysts containing eight or more nuclei, and having a typical structure. The fact that many patients harboring this parasite have been known to suffer from colonic symptoms has been explained by Kofoid on the basis of a subdivision of this group, which he calls the councilmania lafleuri. This latter ameba he describes as having characteristic biologic and morphologic differences from the true *E. coli*. We are classifying this form as *E. coli*, of the councilmania type. Its positive acceptance as a separate species must await further confirmation and independent description. Its chief clinical importance lies in the fact that it emphasizes the probability of positive pathogenic properties in the *E. coli* group of amebas.

2. A group of small amebas which are of minor importance and whose presence should always stimulate the search for histolytica or coli. The chief of these are *E. nana* and *iodamoeba butschlii*.

3. *E. histolytica*. This is the most important of the group, and needs no extended introduction. It has a small cyst with not more than four nuclei, of a fairly characteristic structure. Under ordinary conditions cysts only are seen in the stools, as the active forms represent a biological accident, since they appear only in diarrheic or dysenteric circumstances. These amebas live in undermining ulcers of the large bowel, in which they are distributed around the relatively healthy periphery. Under con-

ditions poorly understood, some of the amebas migrate toward the lumen of the intestine and assume the rounded-up or pre-encysted forms, which at times are recognized in the stool. The cyst is the only form in which the ameba can be transferred to a new host, as the active forms quickly perish outside the human body or are destroyed in the stomach if ingested. Human invasion is accomplished solely through the cysts. It follows that diarrhea or any other condition in the bowel which leads to extrusion of active forms is an unfortunate and fatal accident for the amebas. This gives us the clue to the real relation between host and parasite. The amebic optimum is achieved when the least damage is done to the host beyond furnishing a safe dwelling place for the parasite. A biologic balance between host and ameba is, therefore, to the advantage of both, and this status was formerly and improperly known as a "carrier stage." It is evident that the term "amebiasis" is strictly correct, and that diarrhea or dysentery appears as a symptom as inimical to the ameba as it is to the human host. As we leave hot climates, we find that these symptoms become much less prevalent, and in California and probably in all temperate climates amebiasis exists with a minimum of diarrhea or dysentery. Under these conditions, I have used the term "non-dysenteric amebiasis" to express what might be considered the normal or best adaptation between host and parasite. Lacking dysentery, the infection does not, however, lack symptoms, and we find a considerable list of abnormalities which may be noted in patients harboring amebas, often with constipation as the outstanding symptom and often with no history whatever of dysentery and sometimes with no history of diarrhea.

The term "vegetative ameba" is also unfortunate and untenable in our present knowledge of this parasite. The ameba is either in an active, motile form, or else in the biologic resting stage called a cyst. Cysts are only produced, so far as we know, in locations where they have some reasonable chance of reaching the external world and there invading new human hosts. We do not, therefore, find cysts in hepatic lesions or amebic abscesses elsewhere in the body.

Since more is known of the *E. histolytica* than of the other intestinal protozoa, it is worth recounting that transfer from man to man is largely favored by infected water being used to wash vegetables or fruits which are eaten raw, and in the second place by the medium of flies. Flies ingest amebic cysts and may pass them again within a very few minutes in their fecal droppings. The cysts may remain viable for days at least, if they remain moist. They soon perish with drying. Dr. H. R. Oliver has called particular attention to the importance of hand-to-mouth infection, especially by cooks, as has occurred in the army. This is a matter in epidemiology, requiring careful attention, and it would seem that food handlers should be investigated to insure their freedom from intestinal protozoa.

#### INCIDENCE

The intestinal protozoa, as a class, are of frequent occurrence in California, and are probably widely and somewhat uniformly distributed over the inhabited globe, tending to increase in numbers with

nearness to the tropics. The idea that they are tropical parasites alone is disproved by the ease and frequency with which they are demonstrated in almost any class of patients.

#### SYMPTOMATOLOGY

As has been intimated, evidences of colitis tend to decrease as cold climate increases. In general, protozoal symptoms can be divided into those arising from direct irritation of the intestine and appear as diarrhea and dysentery, and in the second place all the heterogeneous group of phenomena which in some other way are related to the presence of these parasites. This second group can be further classified as follows: (a) Symptoms produced by reflex irritation, as we see in the case of gastric symptoms secondary to an inflamed appendix; (b) symptoms due to absorption of possible protozoal proteins or toxins, not an inconsiderable item when we recall the billions of organisms which go to make up a giardia infection, for instance; and (c) symptoms resulting from the absorption of parenteral proteins from the intestine as a result of protozoal ulcerations or of protozoal disturbances of digestion. It is hard to believe that any of these organisms can live and multiply in the human host without the possibility of their parasite-host balance being at times disturbed and symptoms resulting. With such a classification as we have presented, one can appreciate that symptoms are going to be diverse, remote, numerous, and often bizarre. We are constantly impressed by the neurotic and neurologic symptoms seen in these patients. Many gastro-intestinal lesions are closely simulated, as, for instance, cholecystitis, appendicitis, duodenal ulcer, and colonic cancer. To repeat from a former summarization of my own: "Almost any variety and degree of neurasthenia, physical depression, constipation, loss of weight, anemia, digestive troubles, vague aches and pains, and indefinite ill-health may be associated with amebiasis and disappear when the ameba is eliminated." I am coming more and more to think that this statement is true for intestinal protozoa in general.

#### PATHOGENICITY

Increasing experience with protozoa clinically, makes one doubt if they ever infest man without increasing the health hazards of the host. This is not to say that they are invariably pathogenic. It is rather to say that we can never be sure they are harmless, and in their presence the host runs a greater risk of ill-health than if free from them. Remembering their extremely frequent occurrence in California, it is safe to conclude that every patient with gastro-intestinal symptoms of any sort should be adequately examined for intestinal protozoa, and that every patient in whom the diagnosis is obscure should be examined for protozoa. Moreover, the presence of one parasite of this group should invariably stimulate search for other members of the group, as multiple infections are frequently seen.

#### DIAGNOSIS

Diagnosis rests on one fact alone—the competent observation of active or cyst forms in the stools. I do not believe that any symptom or syndrome is

pathognomonic, and when we recall the possible methods of symptom production, it seems that a pathognomonic syndrome could not possibly occur.

#### AMEBIASIS—E. HISTOLYTICA

Of all the intestinal protozoal infections, amebiasis is the best known and the most dangerous. Emphatically, it can be cured, as is proved by the results of many physicians. It does not get well alone, and is not self-limited. The only proved portal of entry into the human body is through the intestinal tract, and therefore amebic colitis always precedes any other appearance. Amebic colitis, of course, may be so slight as to consist only of a few small ulcerations which produce no local disturbance and which allow the parasites to live in balance with the host, as has been described above.

*E. histolytica* may cause colonic granulomata, may invade the gall-bladder and appendix, and be responsible for hepatitis and abscesses in liver, lung, brain, and elsewhere. It seems doubtful, on the evidence so far available, that the urinary tract or bronchi can be sites of infection. The relation of amebic infection to certain resistant forms of iritis is of special interest since the reports of Lloyd Mills. I have treated one case, in conjunction with Otto Barkan, where marked improvement in the iritis followed removal of *E. coli*. In regard to arthritis, our position is the same as previously stated. The non-bacterial type of chronic hypertrophic arthritis could logically be the result of protozoal action, the mechanism being one of the four ways described above in which protozoa may conceivably produce symptoms and pathology. Certain of our cases are explainable on no other basis. Finally, there is the probability that a phagedenic skin lesion may be caused by amebas, especially in the vicinity of a discharging amebic sinus.

#### TREATMENT

In the case of all the amebas we have good results with a treatment consisting essentially of emetin and neosalvarsan. Seven to ten doses of emetin hydrochloride are given hypodermically, one grain each day. Three doses of neosalvarsan are given at weekly intervals. Either bismuth emetin-iodide, two or three grains daily to a total of thirty grains by mouth, or two additional weeks of decreasing hypodermic doses of emetin follow. This is improved by keeping the patient in bed in the presence of diarrhetic symptoms and restricting the diet. We are now estimating the effects of acid or alkaline type of diet, in the belief that the alkalinity of the intestinal tract has a definite influence on the action of emetin. This course will cure the great majority of cases of amebic infections of any variety. A second course should follow if stool examinations show the presence of cysts within three months of termination of treatment. Cases not cured by three such courses usually require removal of appendix or gall-bladder, or both. A very few cases are still resistant, due to some deep-seated and inaccessible focus of infection, and these rare cases alone should be considered incurable. More recently hovarsol has been used effectively against this and other intestinal protozoa. We will report on this later.

The same regime will eliminate many of the other



protozoa. We have cases of giardia cured by this means. We have also cured giardia infection by the use of neosalvarsan and of mercurochrome through the duodenal tube. There is no established criterion of cure in non-amebic protozoal infections as to the length of time during which cysts are absent before cure can be held certain. It seems probable, however, that five months' freedom from giardia on adequate examination means cure, and that a later appearance of the parasites can safely be laid to reinfection.

Emetin is a dangerous and powerful drug in its action, often producing mild toxic symptoms. These, in our experience, have invariably disappeared with discontinuance of the drug in a few weeks of time. There is a similarity in symptom between emetin poisoning and some forms of beriberi, in the presence of peripheral neuritis, weakness, weak heart, lowered blood pressure and edema. The pharmacology of emetin needs more investigation.

This paper is based on the collective work of my associates, Harry A. Wyckoff, James H. Hall, and Mr. W. O. French.

380 Post Street.

#### DISCUSSION

OTTO BARKAN, M.D. (516 Sutter Street, San Francisco).—The modern conception of non-dysenteric amebiasis promises to elucidate various problems of ocular inflammation. In spite of the relatively satisfactory knowledge of the etiology of iritis, ophthalmologists continue to meet with certain intractable cases whose cause remains unknown.

In 1923 (Archives of Ophthalmology, Vol. 388, No. 6, p. 525), Lloyd Mills of Los Angeles reported four cases of intractable iritis, all giving characteristic histories of non-dysenteric amebic infection of the intestine, all showing entameba dysenteriae in their constipated stools. Cure resulted in two of these cases with the use of ipecac preparations as the sole addition to their local treatment. Treatment in the other two cases was not yet sufficiently advanced to allow conclusive judgment.

A few cases of iritis have, in previous years, been observed in acute dysentery, but to my knowledge Dr. Mills is the first to have observed the causal relation between iritis and the non-dysenteric type of amebiasis.

Since my attention was called to this association by Dr. Mills, I have observed another similar case:

CASE REPORT.—Mrs. R. C. Aged 41 years. Native of Alabama. Lived in the vicinity of San Francisco for twenty-four years. Recurrent attacks of iritis in both eyes since 21 years, as result of which she had almost total posterior synechiae and pupillary membrane of both eyes; threatening secondary glaucoma; vision reduced to counting fingers at four feet. She had, in the past, undergone several thorough physical examinations and been examined by several specialists, without avail. Teeth, tonsils, etc., extracted. In 1923 I performed iridectomy in both eyes, with relief of localized seclusion and some improvement of vision. Patient continued to suffer from recurrences of irritation and exudate into the vitreous, at which times her vision was further reduced. She had not been able to read or write for some years. Nothing remarkable in the history except chronic constipation. Patient was referred to Dr. A. C. Reed, who found entamebae coli in large numbers in the stools. Treatment with emetin resulted in clearing of the vitreous and absence of iritic recurrences since then, one year to date. Vision has improved to: Right eye, 4/10; left eye, 3/10. The lady is now president of a woman's club in her home town, and is able to attend to her correspondence. Unfortunately, the old scar tissue over the pupil does not permit of further improvement of vision. Patient's remaining complaint is that, following the course of emetin, she increased forty pounds in weight. It is interesting to note that the above relation is not an exceptional one, but may be regarded as analogous to oculo-articular syn-

drome in bacterial disease of other mucous membranes—for instance, the Neisser infection of the urinary tract.

Ophthalmology is much indebted to Dr. A. C. Reed and the other workers in the field of non-dysenteric amebiasis for the valuable suggestion which has resulted in the discovery of the cause of a most distressing type of chronic iritis.

LEONARD W. ELY, M.D. (Stanford University Hospital, San Francisco).—Dr. Reed is to be congratulated upon his terse and very practical presentation of a subject which is difficult to digest, as usually set forth. Amebiasis interests me, of course, in its relation to the joints. When we cut up our specimens of arthritis in the laboratory, we find in certain of them—the second great type of chronic arthritis—changes which all our knowledge teaches us are not caused by bacteria nor by trauma. In such circumstances we can take refuge in such vague terms as disturbed metabolism, rheumatic diathesis or the like, or we can simply say, as I have said, that the areas of necrosis, which seem to be at the bottom of the pathological process, must be caused by some living organism, and pursue our search for this organism. Unfortunately, Kofoid's claim, made almost three years ago, for the ameba histolytica has never been confirmed, but I am convinced that some sort of protozoon is responsible for this disease, and our work at the Stanford clinic indicates that it may be one of several. Our method of dealing with patients at the clinic, as soon as the diagnosis of second type arthritis is made with the x-rays, is to institute a search for parasites in the stools, and to close any port of entry from the gastro-intestinal canal to the system, and I am more confirmed than ever in the opinion that this port of entry in the great majority of cases is through the diseased bone at the roots of dead teeth. I think that the presence of the bone changes is better explained by the invasion of the organisms themselves than by their products. All this is theory, of course, and is not to be regarded as proved until we have found the organisms in the bone marrow. Proceeding on this theory our results have been excellent, and encourage us to continue our treatment in a class of cases which hitherto have been practically hopeless. Our percentage of positive finds has steadily risen in the past two years. Thanks to the skill and interest of Dr. Wyckoff the co-operation between the laboratory and the clinic has been close. The ameba coli has been found more often than any other organism, giardia, chilomastix, and histolytica less frequently; other organisms occasionally. One day in the week is set apart for the administration of neosarsphenamin. When no organisms are found, we give the emetin preparations without the neosarsphenamin.

HARRY A. WYCKOFF, M.D. (Lane Hospital, San Francisco).—While this paper has numerous excellent features, I wish to direct attention to but two points:

1. The conception of a highly successful adaptation by the parasite to the conditions existing in the body of the host, together with a very narrow specialization as a result.

2. That the maintenance of balance between the life of the parasite and that of the host is the optimum condition for the parasite.

Both appear to be valuable aids toward a better understanding of protozoal infections.

JOHN V. BARROW, M.D. (2007 Wilshire Boulevard, Los Angeles).—This paper is timely and to the point. The only physician who fails to appreciate its importance is the one who has made no study of the subject or does not care to study all the physical conditions of his patients. The incidence of the infections to the pathology produced is far too great to be coincidence.

I do not think Dr. Reed is quite right in his statement that active ameba dysenteriae occurs "only in diarrheic or dysenteric circumstances." Our experience is that they are really hardest to find in some of the most severe dysenteries. In a few cases where the colon was a mass of amebic ulcers, no amebae were found in the stool over a period of three to six weeks preceding death. Post-mortem scrapings of the ulcer bases revealed myriads of the organisms.

It is well to remember that in the investigated parts



of our country dysentery occurs in not over 25 or 30 per cent of the cases of amebiasis.

The symptoms are well stated. Even more than the author, I am convinced that any or all protozoa may be or become pathogenic.

The presence of human intestinal protozoa is no greater in California than in other states of the Union. The Middle States show an equally high percentage of cases. I have checked the origin of the infections in several hundred cases. There is usually more than one kind of organism in the same host. To me, the most commonly found organism is the chilomastix. The infection is overwhelming in the majority of the symptomatic neuritides. Since our first case of amebic iritis, Dr. Lloyd Mills and I have treated well over one hundred cases similarly, and with continued gratifying results. These cases, with others, are being carefully observed and studied, to be incorporated in a later combined report.

Whether or not the intestinal protozoa concern the etiology of arthritis of Ely's Type 2, I believe I can safely state that no other form of medical treatment does so much for these patients. This treatment should certainly be combined with the recognized orthopedic management to secure best results.

Dr. Reed has not mentioned the differential blood picture in these cases.

There seems to be a general depression of the leucocytes in protozoal cases. This depression seems to affect the polynuclear cells most. A differential count of polys and monos will often disclose a protozoal infection. The picture is often such as: Wbc. 5900, polys. 51 per cent, monos. 49 per cent. This leucocytic depression serves a valuable aid in ruptured viscera, as the appendix. The count rises as the pyogenic organisms invade.

I am sure the great majority of these cases can be cured. Dr. Reed's treatment is fine, but it stops too soon. No case of intestinal protozoa should be pronounced cured in from three to six months, any more than we would give the same judgment in a case of lues or tuberculosis. The treatment should be outlined under three heads, viz., persistence; more persistence; *persistence*.

CLARENCE G. TOLAND, M.D. (Pacific Mutual Building, Los Angeles)—I am not capable of discussing a paper of this type intelligently, as I am not an internist nor do I understand all the pathology produced by intestinal parasites.

However, in my surgical practice, I am very often impressed with the fact that many patients sent to me for operation for some supposed obscure surgical condition (usually a combined diagnosis of chronic cholecystitis and chronic appendicitis) have been studied from the standpoint of present history and gastro-intestinal x-ray, but practically no attention has been paid to the possibility that these patients may be suffering from a parasitic colitis.

I feel too much attention cannot be paid to stool examinations in all cases of doubtful surgical pathology in the abdomen.

All of us pay too little attention to the past history of all of our patients; also too little thought is given to the locality of our patient's residence.

When we are asked to operate upon a patient complaining of pain, for instance, in the right inferior fossa or at the right costal margin regions of the abdomen, whose symptoms have been of a chronic, growling type, without a previous history of anything simulating an acute appendicitis, gall-bladder colic, duodenal irritation or renal colic, we must be sure we have surgical pathology, as we are held responsible for the outcome of this case. Also, we subject such a patient to a difficult operation that carries a surgical mortality. Little pathology may be found; at least, not enough to explain the patient's symptoms, as pain, gas, tenderness, weakness, occasional temperature, little diarrhea alternating with constipation, no appetite, and lastly secondary anemia of any degree.

If the stools had been thoroughly studied by a competent man, amebic colitis would probably have been found. Medical treatment would relieve the patient symptomatically, and allow him to work again.

I do not feel that I have discussed Doctor Reed's paper in the manner that it justifies, but he and Doctor Barrow

show us many times that a great many needless operations are done upon patients of the type under discussion.

The surgeon is needed, so is the internist, but any man of these who is of the monorail type should be controlled in some way, as we might be able to prevent many needless operations; or we might, on the other hand, help the internist to not go too far in his belief of the damage that intestinal protozoa may produce.

EDWARD F. STADTHERR, M.D. (Flood Building, San Francisco)—Doctor Reed's paper is very interesting and pregnant with valuable knowledge, especially his discussion of the much-condemned neurasthenic. For the last three years I have been observing the so-called neurasthenic harboring intestinal protozoa before and after treatment by Dr. Reed at the Stanford clinics. It is gratifying to note that about 80 per cent were discharged as well after they were rid of the intestinal protozoa.

Instead of having the usual intestinal complaint, I found that most of them were sent to the neuropsychiatric clinic on account of nervousness, insomnia, nocturia, general fatigue, headaches, and loss in weight. Out of twenty patients, only three complained of stomach trouble, five of constipation, and one of diarrhea. Other complaints were vertigo, poor vision, muscular twitching, flea sensation, night sweats, dreams, palpitation, cold extremities, hot flashes, etc.

The blood usually revealed a leukopenia, eosinophilia, plus a low hemoglobin.

In conclusion I want to add that, before indexing a patient as a "neuro" or before operating on patients with vague intestinal symptoms, be sure intestinal protozoa are not at the bottom of it.

DOCTOR REED (closing)—The subject has been covered from many important standpoints. Unknown factors of pathogenicity and control make divergence of opinion inevitable and desirable. We need to record and compare. It is indeed disheartening to read in the editorial pages of the journal of the American Medical Association (February 28, 1925) the opinion that there can be healthy carriers of *entameba histolytica*. Healthy they cannot be with such a parasite. Acquaintance with the influence on these carriers, so called, of meteorological conditions, such as humidity, warmth and low barometer, tends to dissipate once for all any idea that this parasite can ever be safely or harmlessly harbored in the human body.

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"A hospital connected with one of our leading Eastern medical schools," says Edgar James Swift (Scribner's magazine), "has a large tuning-fork which has marvelous curative properties. Now the patients to whom it is applied do not know that it is an ordinary tuning-fork. If they knew this it would be useless. But modern civilized man has a curious superstition about the effect of magnets. So patients are told that this big tuning-fork is a 'magnet,' and many afflicted with hysterical paralysis of leg or arm are cured by the application of this mysterious object to the limb which the patient believes is paralyzed. And at other times the mystic power of the unknown, symbolized by the 'magnet,' subdues the unintentional refusal of patients to be cured." "Quackery and Its Psychology," the article from which this is an abstract, is well worth perusal.

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An Oregon man was trying to sell a horse. The animal was wind-broken, but sleek. The owner trotted him around for inspection, and, bringing him back to the prospect, he stroked the horse's back and remarked, "Hasn't he a lovely coat?"

The prospect removed his pipe from his mouth and said, as he looked at the heaving flanks of the animal, "Yeah, his coat's all right, but I don't like his pants."

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The obligations of a hospital to a community are not merely those established by law. There are higher rules for the regulation of hospitals and these involve moral responsibilities to a community, which include an appreciation of some of the finer things in life, the courtesies, the humanities and the spiritualities of human contact.—Editorial, American Medicine.

## THE ANTAGONISTIC FUNCTIONS OF THE UTERUS IN RELATION TO REGIONAL NERVE-BLOCKING

By HARRY THEODORE COOKE, M. D., Los Angeles

*In any obstetrical condition that can be benefited by desensitization of the protective pain sense and the complete relaxation of the tissues involved, regional nerve blocking is indicated.*

*In weak anemic patients with low blood pressure, the method is contra-indicated.*

DISCUSSION by M. H. Ross, Los Angeles; Nannie C. Dunsmoor, Los Angeles; Nahum Kavinoky, Los Angeles.

THE UTERUS, AS A WHOLE, is a muscular sac, having the functions of a dilatation and contraction. Its function in the body of the human female is to be the receptacle whereby the phenomenon of menstruation is performed each month, and when this is not the case its function also is to be the receptacle of the products of conception, to furnish through its walls nutrition to them, and to dilate and stretch as these products increase in size, and later to have the function to contract and to expel these contents, and then to return to its original form and size, and to repeat this process several times if necessary in the life of the individual. The uterus then is a very wonderful muscular sac, having functions quite different from other muscles in the body, partly due to its shape and attachments; but, like these other muscles, having the ability to contract forcibly and relax, with this difference—that it relaxes first and then contracts forcibly afterward.

ITS ANTAGONISTIC FUNCTIONS—Now, while these functions are co-ordinating for a purpose they at the same time are in opposition to each other, just as much so as opposing skeletal muscles. The only time when the uterine musculature is in harmony is when the uterus is empty or inert, and it is contracted in its entirety, and it is functionless or at rest. As soon as it starts to function its antagonism in its component parts is apparent. The uterus should not be considered as a whole, but as an upper part, which would include the upper uterine segment and the fundus, and a lower part, including the lower uterine segment and the cervix.

ITS DOUBLE NERVE SUPPLY—The reason for dividing the uterus into upper and lower parts is because of its nerve supply from two sources, for when (during pregnancy) it begins to function the upper part is dilating to accommodate the increasing size of its contents, while the lower part is strongly contracted to keep the uterus air-tight and later to support the increasing weight. Now, this opposite function is under the control of two systems of nerves. The fundus and upper uterine segment is innervated by involuntary nerves of the sympathetic system with the assistance of its own intrinsic nerve centers in the uterine muscle; and the cervix and lower uterine segment, as well as the rest of the birth canal, is innervated from the cerebrospinal system, which registers sensation in the brain and produces motion or tonic contraction. The sharp line of demarcation between these two systems in the uterine musculature, between the upper and lower uterine segments, I have concluded is at

Bandl's ring or the point of attachment of the broad ligament to the brim of the pelvis. Above this point there is only involuntary nerve action, but no protective pain sense nor response to injury, while below this point sensation and pain sense are present.

THE BIRTH CANAL is that part of the female tissues through which the child must pass when expelled by the uterus. Now, this entire birth canal, including the lower uterine segment, the cervix, the vagina, the muscles of the floor of the pelvis, the vulva, and the perineum, are all sensory and motor, and are in tonic contraction and under the control of the cerebrospinal system.

LABOR is the use of the mechanism whereby the child is expelled from the uterus during its passage through the birth canal, and it is well named, for it is usually a hard thing to accomplish, and it is often marked by much pain and distress, and frequently by injury.

ITS SIGNIFICANCE—It signifies the completion of the growth of the child and the need for its expulsion, to start it on its way as an independent human being, and to obtain its oxygen and nutrition by a method other than the mother's circulation.

It signifies also that the "powers of labor" (which are the contracting fundus, the weight of the child, and the co-ordinate use of the abdominal muscles) are about to come into action.

THE CAUSE OF CHILDBIRTH PAIN—Now, having considered the "powers of labor" in their expulsive efforts to force the child out, and knowing that *contractions of the upper segment* are involuntary, therefore painless, as *one labor factor*, that the influence of the *child* as the *second labor factor* is only that of *gravity* from *weight*, and the *use of the abdominal muscles* as the *third labor factor*, is to aid in this expulsion, there is no pain in their use at this time, any more than the use of any muscle in the body. Where does the pain come from? Only from the tissues of the entire birth canal which are now forced to stretch and relax sufficiently to let the child pass, and, of course, this protective pain sense is registered in the brain and this stimulation results in more muscle tone in the tissues of the birth canal, causing a vicious cycle, thus further delaying delivery, until the woman is all worn out and she finally no longer can put enough muscle tone in these tissues to prevent relaxation, and under these harrowing conditions the child is finally born. And this is termed "a normal delivery." This reminds one of the days before anesthesia. In those days when a surgeon wished to cut off a man's leg enough strong men were called in to hold him and sit on him if there was room enough to keep him still until the surgeon was through. This was the *natural method*.

Now all this distress is caused by our protective pain sense in response to injury, and while at times it is well to "let nature take its course," there are times when this becomes barbaric, and this pain must be controlled and obliterated. This is the time when a woman turns to her physician for relief and comfort.

NERVE-BLOCKING—There are various chemical substances, gases, solutions, which can be swallowed,



inhaled or used in an enema, or painted on the skin or mucous membrane, or injected into the skin or muscle that will take away pain. We decide and select the ones most satisfactory and best suited to our purpose. The dentists block off nerve trunks to make painless their work on our teeth. The pain of childbirth can also be blocked off so that there will be no protective pain sense and contraction in the birth canal and consciousness still be retained. If these tissues are blocked off they cannot register pain, nor can they contract while this nerve block lasts. When there is no pain and the tissues are relaxed and can be stretched, we then can have "a painless conscious childbirth," provided that in normal spontaneous deliveries we do not interfere with the action of the forces of expulsion.

If the pelvic measurements are abnormal enough to make it difficult for the child to pass through the bony pelvis, manual, mechanical or instrumental delivery is required, in which case regional nerve-blocking is satisfactory. If the size and form of the bony pelvis in relation to the child is so out of proportion as to require a Caesarean section as the only means of delivering the child, the problem resolves itself into an abdominal operation, with no reference to the stretching or dilation of the birth canal, as these tissues no longer enter into our problem.

The form of regional nerve-blocking of choice is the desensitization and relaxation produced by the injection of novocain into the arachnoid space surrounding the spinal cord. This can be so controlled as to meet satisfactorily the requirements of all the various forms of deliveries.

#### SUMMARY

1. The uterus, as a whole, is a *muscular sac*, having the co-ordinate but opposite functions of contraction and dilation in its component parts.

2. In pregnancy its upper part relaxes and enlarges, while the lower part is in tonic contraction, *these functions being antagonistic*. In childbirth these functions are reversed, and again are antagonistic, and again co-ordinate at first to hold the child, now to expel it, and this is accomplished by:

3. *Double Nerve Supply*—The upper uterine segment being from the sympathetic or involuntary nervous system, and the lower uterine segment being from the cerebrospinal system, which is sensory and motor and registers protective pain sense and governs tonic muscular contraction of skeletal muscles.

4. *The birth canal* is that part of the female tissues through which the child must pass when expelled by the uterus. All the tissues composing it are under the control of the cerebrospinal system of nerves, and they register in the brain protective pain sense which causes tonic contraction of these tissues.

5. Labor is represented as the powers of the body, able to force the child through the normal pelvis and birth canal.

6. *It signifies* that the child is to be forced out to obtain its further growth and nutrition by methods other than the mother's circulation.

7. *Childbirth pain* comes from the stretching of the contracted tissues of the birth canal as the child passes through them. The presenting part starts to

stretch to the limit these tissues, this stretching causes pain, this results in protective muscular contraction to ease this pain, which delays delivery of the child.

8. *Its relation to nerve-blocking* of this vicious cycle is that the blocking inhibits the brain from registering pain and the tissues are inert and relaxed and as functionless as a telephone receiver would be with its wire cut, and would remain so until again connected, which in this case is when this novocain gradually loses its inhibitory effect. During this blocking off of pain the obstetrician now can easily stretch or dilate these tissues after the method of Potter, to facilitate the passage of the child and prevent trauma, which results in a "painless conscious childbirth."

If the child is not too large and the tissues permit of normal stretching, the birth can be spontaneous. The patient being fully conscious, she can aid in her own painless delivery by bearing down with her abdominal muscles as directed, as she no longer has the sensation that the more she bears down the more it hurts. This relationship has been interfered with by our blocking. If the pelvis or child are at all abnormal, then a manual or an instrumental or a surgical delivery is indicated, but even then the delivery will be "a painless conscious childbirth," as these various conditions are amply taken care of under this "regional nerve-blocking."

In a paper on "Spinal Analgesia in Obstetrics, Including Caesarean Section" (American Journal of Surgery, October, 1923), I discussed the technic in detail, and case reports were noted.

Co-ordination of opposite forces for a specific purpose in the growth of the child, and again co-ordination of reversed opposite forces for the child's expulsion, is essential to the activities of the uterus under varying conditions.

In considering the functions of the body by regions, and interfering for a time with one, any one or all of these regional activities, by regional nerve-blocking, may be a new viewpoint to some, but the ability to do these things has long ago passed the experimental stage and they are definite, safe and pleasant to use. The only way that we can take advantage of these peculiar and antagonistic functions of the uterus, as I have endeavored to explain, is by selective nerve-blocking.

The anesthetist can take advantage of these conditions by interfering with one function and not the other, and thus aid delivery. The obstetrician can then work under the favorable conditions of no protective pain sense and complete relaxation. That is why this method is the one of my selection.

1408 Fuller Avenue, Hollywood.

#### DISCUSSION

M. H. Ross, M. D. (Pacific Mutual Building, Los Angeles)—In the selected cases in which I have used the method discussed in this paper, I report 100 per cent satisfaction.

These patients were all of primary uterine inertia, in which it was deemed necessary to assist nature at the birth of the baby. Before I used the method my greatest concern was (1) would I get sufficient relaxation of the lower uterine segment, and (2) if I did, how would the upper segment react in regard to hemorrhage. Both of these fears have passed since I have used the nerve-blocking method. The most notable feature in its use is



the complete block of shock. None of my patients suffered any shock and ate a full meal on return from the delivery room, and continued daily to do so.

None of my patients had a headache following delivery. Quite a noticeable fact, when we remember those following intra-spinal injections of a few years ago. I think this due to the position of the patient, having the head elevated during and following delivery.

Atropine was used just prior to the spinal injection to balance the blood pressure, which otherwise might have a tendency to fall.

It is quite a satisfaction to have a patient conscious during manipulations and at all times perfectly free from pain. While a few cases prove nothing, still where even a few cases all act the same way with a certain method confidence in it is strengthened. While I would not recommend nerve-blocking as a routine method to be practiced under all conditions, neither would I do a version on all normal cases of labor.

In instances of relative uterine inertia, or in which the lower segment fails to dilate properly and delays labor, I feel we have an aid to nature and a blessing to the worn-out, nervous or hysterical mother.

NANNIE C. DUNSMOOR, M. D. (Pacific Mutual Building, Los Angeles)—In regard to spinal anesthesia in obstetrics, I have delivered eight patients, with Dr. Cooke's assistance as anesthetist. All but one primipara. Three were elective, and five were emergencies. One patient (the multipara) gave a history of post-partum hemorrhages at previous confinements. Under nerve-blocking, the fundus contracted well and she escaped hemorrhage at her last confinement. One patient, 36 years old, wished to escape the pangs of labor. One patient, 17 years old, in a late stage of pulmonary and laryngeal tuberculosis came into labor at eight months. It took twenty minutes after nerve-blocking to dilate the cervix. There were no post-partum complications. She died one month after delivery of tuberculosis and starvation, leaving a healthy baby. The other five patients were slow in dilating the cervix, being in labor from ten to twenty-one hours without results before deciding to have spinal anesthesia. The cervix in each case was dilated manually in from ten to twenty minutes, then forceps were applied.

There were no post-partum rises in temperature, nor other complications.

NAHUM KAVINOKY, M. D. (Brockman Building, Los Angeles)—I believe that the use of spinal anesthesia in obstetrics, so ably advocated by Dr. Cooke in his paper, will find its place as a valuable aid to the obstetrician in many complicated labor cases.

It proved of great assistance to me in a patient with mitral stenosis and marked decompensation (thyrotoxicosis was an additional complicating factor). I was confronted with the necessity of terminating pregnancy three weeks before full term (in a gravida II), and in choosing the method of delivery I considered it of the utmost importance first, to spare the patient the strain of spontaneous labor, second, to avoid the danger of a general anesthetic. I used spinal anesthesia, given by Dr. Cooke.

The most striking feature of the delivery was the ease with which the dilatation of the cervix was accomplished in twenty-five minutes, the delivery by version of a six-pound live baby.

By comparison with previous cases of dilatation of the cervix in labor, I gained the impression that, with spinal anesthesia, the relaxation of the cervical musculature is more complete than under general anesthesia.

DOCTOR COOKE (closing)—Some children delivered by me after spinal anesthesia are now 6½ years of age. I have also used spinal injections for all kinds of operations below the diaphragm. I knew what to expect of its use in obstetrics; and its efficacy has been tested in breech, forceps, and Caesarean section cases. Some of the patients have suffered from primary uterine inertia, eclampsia, double lobar pneumonia, heart and kidney complications, and some of them were delivered from eight to twenty-two days before term, with living babies.

If spinal anesthesia is efficacious in blocking off pain and shock, and securing relaxation under such extreme conditions, why cannot the average woman also have a "painless conscious childbirth."

Of Dr. Ross' four patients, three were delivered by podalic version and one by forceps.

His first patient had primary uterine inertia (three weeks overdue). Was delivered by podalic version in thirty minutes after the injection, the placenta in thirteen minutes more, with patient smiling and conscious, and without pain.

Dr. Dunsmoor's eight patients were all delivered by forceps, the multipara in sixteen minutes from time of injection, conscious but without pain.

Dr. Kavinoky's one patient was delivered by podalic version in twenty-seven minutes twenty-two days before term, on account of heart condition. There is no nerve connection between mother and child, consequently the baby is not affected by this method.

In any obstetrical condition that can be benefited by desensitization of the protective pain sense and the complete relaxation of the tissues involved regional nerve-blocking is indicated.

In weak, anemic patients with low blood pressure, the method is contra-indicated.

Success with regional nerve-blocking requires careful technique and familiarity of all its problems, and it should not be experimented with.

## SOME INTERESTING UROLOGICAL CASES IN WOMEN AND CHILDREN \*

By WILLIAM E. STEVENS, M. D., *San Francisco*

DISCUSSED by G. Carl H. McPheeters, *Fresno*; William H. Brennen, *Eureka, Nevada*; R. P. Roantree, *Elko, Nevada*, and Miley B. Wesson, *San Francisco*.

IT IS a generally conceded fact that disturbances are much more frequently encountered in the urinary organs of women and female children than in those of the opposite sex. This is to be expected when the difference in physiological functions of the generative organs, the anatomic relationship and the increased sensitiveness of the female bladder to direct and indirect influences are taken into consideration. Frequency of urination is the most common symptom of which women patients complain, and although more often due to urethritis with or without trigonitis, pyelitis, or to an urethral stricture, either at the meatus or in the lumen of the canal, patients are repeatedly seen in whom such simple conditions as a caruncle or an highly acid urine are responsible for much discomfort.

Other cases are encountered which tax to the utmost our diagnostic resources, when anything short of a most thorough investigation by means of all the modern methods at our command will result in an incorrect diagnosis and frequently in disaster to the patient.

A case which I saw recently while in Vienna is both interesting and instructive.

CASE 1—The patient, a woman 50 years of age, complained of a lump in the right side of the abdomen. Examination revealed a somewhat sensitive, slightly movable mass about 10 cm. in length and 5 cm. in breadth, occupying part of the upper and lower right abdominal quadrants. The center of the mass was on a level with the umbilicus. A catheterized specimen of bladder urine contained a number of pus cells. The urologist and his assistant made a positive diagnosis of tumor of the kidney, and did not consider other diagnostic measures necessary. The gynecologist was equally certain that the mass was an ovarian cyst. Operation, however, revealed a retroperitoneal lymphosarcoma. This error would have been avoided by radiography of the kidney, with the patient in the upright position, or by pyelography. The

\* Read at 1924 Nevada State Medical Association's Annual Meeting, Bowers Mansion, Nevada.

latter procedure reveals a deformity of the renal pelvis in almost every instance in the presence of tumor of the kidney.

An abnormal degree of mobility of the right kidney is much more frequently encountered in the female than in the male. That this condition may be undeservedly blamed for symptoms with which it has no connection, is illustrated by the following case:

CASE 2—This patient complained at times of pain and tenderness in the upper right abdominal quadrant. These symptoms had recently increased in severity. A freely movable right kidney was found on examination. Cystoscopy and functional kidney tests were negative, and the attacks of pain were considered due to kinking and the resulting obstruction of the ureter following displacement of the former organ. The pain did not disappear after nephropexy, however, and an exploratory operation one month later revealed a carcinoma at the beginning of the transverse colon. The symptoms, which were in all probability due to partial obstruction of the intestine, disappeared following resection. Although the mistake was in a measure excusable in this case, a more careful examination would probably have revealed the intestinal growth.

CASE 3—A woman, 63 years of age, came to the office, complaining of hemorrhage from the vagina, blood in the urine, and frequency of urination. These symptoms were of about ten weeks' duration. Vaginal examination was negative, but a catheterized specimen of bladder urine contained blood, pus, and albumen. Cystoscopy was somewhat unsatisfactory on account of bleeding, but a large mass could apparently be detected on the right lateral wall of the bladder.

Cystography, following the injection of 10 per cent sodium iodide solution, definitely revealed the position, size and infiltrating type of the bladder growth. The right ureter was not involved.

As much of the tumor as possible was destroyed by cauterization and radium needles implanted. Improvement followed the operation, but was of comparatively short duration.

This case is interesting because, notwithstanding the size of the growth, the symptoms were of but ten weeks' duration. It serves to illustrate the value of cystography in bladder tumors, and likewise demonstrates the fact that a patient's statement as to the source of blood is of little value.

CASE 4—This patient complained of frequent and, at times, difficult and painful urination. She also suffered from pain in the suprapubic region. Examination revealed an urethral stricture and a cystocele. A catheterized specimen of bladder urine was chemically and microscopically negative. The symptoms improved after two or three dilatations of the urethra, but did not clear up completely. A second examination of the urine revealed a few pus cells. Cystoscopy and examination for ureteral strictures were negative. Both kidney urines were microscopically and culturally negative.

A third examination of the bladder urine one week later revealed a large number of pus cells, and tubercle bacilli were now found on examination of the stained sediment. The patient was again cystoscoped and urine obtained from both kidneys. The left kidney urine now contained a few pus cells, and the guinea pig inoculated with the urine from this kidney was positive for tuberculosis. This case illustrates the fact that renal tuberculosis is sometimes responsible for bladder symptoms, although the urine is at times chemically and microscopically negative and it emphasizes the importance of repeated examinations of the urine in the presence of symptoms referable to the urinary tract. In my experience there has been less bladder involvement accompanying renal tuberculosis in women and female children than is the case in the opposite sex.

Contrary to general opinion, a stricture in the lumen of the female urethra is by no means uncommon and a congenitally narrow or an acquired

contraction of the meatus, in other words, a stricture at this location is frequently encountered.

CASE 5—The wife of a physician had complained of frequent urination, at times accompanied by pain in the suprapubic and lumbar regions, for four years. Examination was negative, except for a tight urethral stricture 1 cm. from the meatus. A filiform followed by a Le Fort metal catheter was passed with some difficulty, and the urethra dilated. Marked improvement followed this procedure. All symptoms disappeared after the second treatment, although dilation of the urethra at intervals was continued for several weeks.

Another patient complained of hematuria, in addition to the above symptoms. Two polypi, as well as a tight stricture, were found in her urethra. Immediate relief followed the destruction of the polyps and treatment of the urethral stricture in the manner outlined in the preceding case.

CASE 6—A female child, 3 years of age, complained of frequent and painful urination. Examination revealed a stricture at the external urethral meatus. The urine contained a few pus cells. Immediate improvement followed the first, and all symptoms disappeared following the third dilatation of the urethra.

CASE 7—This patient complained of a sensation of pressure in the suprapubic region and difficult and interrupted urination periodically for four years. These symptoms had been constant for the previous two months. She was under treatment for tabes, following lues contracted twenty-three years before coming under observation. Examination revealed a stricture at the urethral meatus. The urine flowed very slowly through an urethral catheter inserted into the bladder, and 120 cc. of residual urine were found. This contained a moderate number of pus cells. Cystoscopy revealed some injection of the bladder mucosa, but notwithstanding her tabes, very little trabeculations of the bladder wall. The kidney urines were microscopically and culturally negative. The subjective symptoms improved rapidly, following dilatation of the urethral stricture and irrigation of the bladder, and the patient was most grateful for the relief obtained. Although comparatively infrequent in women, the possibility of tabes as an etiological factor in bladder disturbances must be remembered.

A vesico-vaginal fistula following labor, operation, radium therapy, or external violence is not uncommon, but a fistula following laceration of the posterior wall of the bladder.

CASE 8—A hysterectomy was performed by a well-known surgeon because of a large uterine fibroid. The bladder wall was thin, and with the peritoneum, closely adherent to the tumor mass, which extended upward to the umbilicus. In attempting to separate the bladder wall from the uterus, the base of the former organ was torn. Following removal of the uterus, the tear was closed with a continuous catgut suture. Six days later the patient complained of a slight cough, tenderness along the lower right costal margin anteriorly, and some pain on inspiration at the base of the right lung. Distant breath-sounds and some very fine rales were heard over this area. A diagnosis of pneumonia was made. Two days later the tenderness was more severe, some swelling was apparent and the patient also complained of burning and frequent urination and pain in the right groin, worse on voiding. A catheterized specimen of bladder urine contained a large number of pus cells. Two hundred and forty cc. of residual urine were found. Cystoscopy revealed marked inflammation and edema of the bladder mucosa. The ureteral orifices were not visible. Indigocarmine did not appear on either side within twenty-five minutes after intravenous injection. Operation was advised, but refused by the patient. One week later, her condition becoming gradually worse, consent to operate was finally obtained. Following an oblique right lumbar incision, half a pint of thick, foul-smelling pus was evacuated. No pus was found inside the fatty capsule of the kidney. Some urine escaped through the wound for about six weeks after operation. It was now possible to catheterize the right as well as the left ureter. The right kidney urine contained an occasional pus cell; the left



was microscopically negative. Cultures from both showed colon bacilli. The patient made an excellent recovery after a somewhat prolonged convalescence. The bladder fistula would have closed much earlier if lumbar incision permitting drainage had been allowed by the patient when the diagnosis of extraperitoneal extravasation and infection was first made. Delay in operating upon extraperitoneal lacerations at best retards convalescence and results in intense suffering. Without immediate operation intraperitoneal lacerations are rapidly fatal.

**CASE 9**—An emaciated female infant, 4 months and 29 days of age, suffered from frequent and painful urination. A catheterized specimen of bladder urine contained a large number of pus cells. Cystoscopy, by means of a small cystoscope, revealed an inflammation of the bladder mucosa, most pronounced at the trigone. The ureteral orifices were large and the adjacent mucosa slightly injected. Both ureters were catheterized to the pelves, and urine obtained for microscopical examination and culture. A 1-1000 solution of silver nitrate was injected before removal of the catheters. The urine from both kidneys contained colon bacilli and a few pus cells. A gain in weight and improvement in the baby's general condition followed the first and two subsequent irrigations of the kidney pelves. The kidney urines were culturally negative following the first treatment.

Twelve days later a slight vaginal discharge was noticed. A catheterized specimen of bladder urine contained numerous pus cells, but the kidney urines were still culturally negative.

This case is interesting because of the prompt response to lavage of the kidney pelves, and because of the age of the patient. It also demonstrates the feasibility of the application of modern methods of diagnosis and treatment in pathological conditions of the urinary tract in infants. I have not been able to find another case recorded in the literature in which so young a patient has been treated by means of irrigation of the renal pelves.

Flood Building.

#### DISCUSSION

**G. CARL H. MCPHEETERS, M. D.** (Fresno, California)—In my work with pregnant women I find that more than one-half of all these patients have bacteria and pus cells in the urine at some time in the pregnancy. Some of these do not have any urinary symptoms; most of them do. Relief of their constipation is all that is needed to render the urine clear in many cases. Some require urethral dilatation and then clear up. Others require bladder irrigation, together with diuresis and urinary antiseptics by mouth. Many will not clear up until the kidney pelvis is washed out and better ureteral drainage established on one or both sides. Such care is imperative and of utmost importance in pregnant women, since pyelitis and pyelonephritis are frequent causes of intra-uterine death.

Among female babies and little girls up to puberty, pyelitis is exceedingly common. Almost every such child having infected tonsils and adenoids exhibits pus and bacteria in an alkaline or neutral urine, rarely also in an acid urine. It is our plan to treat these medically for a reasonable time, say one month, and then resort to the urologist who treats the higher urinary tract. It is especially important to cure these conditions in little girls before they reach puberty, since they are to become the mothers of the future generation.

I want to thank Dr. Stevens for a very timely and valuable paper.

**WILLIAM H. BRENNEN, M. D.** (Eureka, Nevada)—To the general practitioner, the outstanding features of interest in Stevens' paper are: First, the emphasis laid upon the value of urethral dilatation in females as a relief measure in urinary troubles. I have used simple dilatation of the female urethra for the relief of acute cystitis during the past four years with uniformly good results. Frequently, after alkalines and urinary antiseptics and rest in bed had failed to effect relief, dilatation was followed by prompt recovery. A very carefully taken

history in many of these cases will reveal a gonorrheal origin of the stricture.

Second. The implied admonition to not take the patient's word for the interpretation of symptoms, as illustrated in his third case: One experience cured me of this habit, too frequently indulged in by physicians. A young woman, 31 years old, was pregnant. At the end of the third month she came, complaining that she was menstruating. Suspecting an abortion, I ordered her to bed. Promptly the bleeding stopped. I explained to her that in rare instances women menstruated during the early months of pregnancy. Within two weeks the supposed menses began again. Vaginal examination revealed no bleeding from the uterus. However, oozing of blood from the urethra was noticed. Cystoscopic examination revealed the presence of a villous papilloma. She was referred to an urologist for fulguration of the growth.

**R. P. ROANTREE, M. D.** (Elko, Nevada)—Doctor Stevens has made some of us who are doing general work feel less like criminals than the genito-urinary men who insist that all such cases should be immediately referred. A general practitioner can take a complete history, make a thorough physical examination, and check his findings against the history. I have found some benign and two malignant strictures of the urethra. Symptoms in all cases were greatly relieved by dilatation. Hank's uterine dilators were particularly useful in this procedure. In my work I make an absolute rule never to attribute symptoms to a movable kidney until every other possibility has been ruled out.

**MILEY B. WESSON, M. D.** (Flood Building, San Francisco)—Doctor Stevens has emphasized throughout this paper that a careful history and a thorough physical examination are far more important than a cystoscopic investigation; and it is from articles of this type that the general practitioner learns how to avoid the pitfalls of ultra-scientific urological diagnosis. If all patients were carefully examined by an internist before being subjected to urological maneuvers, fewer mistakes would be made.

The second case illustrates the principal reason for Howard A. Kelly's nephropexy having become practically an obsolete operation. A movable kidney is not at all uncommon and generally gives no symptoms. In this case the three cardinal symptoms—pain, gastro-intestinal irregularities, and nervousness—of nephroptosis that call for kidney suspension were present. The fact that they were not due to the movable kidney but to carcinoma of the colon would have been discovered if the patient had had a thorough physical examination by a competent internist.

The medical profession owes Stevens a debt of gratitude for the pioneer work he has done in calling attention to the frequency of urethral strictures in females. The relief that follows the mere passage of sounds is out of all proportion to the simplicity of the treatment.

The last case should be of interest to both pediatricians and urologists, as a bilateral pyelitis in an emaciated female of less than five months was cured by means of three kidney lavages. The use of alkalies, etc., by mouth should be tried in most cases of pyelitis in infants; but this treatment is generally persisted in for too long a time. Pelvic washings should be used in all cases that are severe, or do not respond to immediate alkalization. The fact must not be lost sight of, however, that the passage of a cystoscope in the very young or the extremely aged is a matter requiring delicate technique, as the shock is often greater than that of an abdominal operation. Stevens has demonstrated clearly that there is no age limit for cystoscopy.

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Can any one in his senses suppose that diseases a man has been his whole life contracting and to which he is adding every day by perseverance in unwholesome diet, and bad habits, are to be thus removed by a coup de main ou de baguette? or that they will not return, be they cured or conjured away ever so often, while he continues the same mode of life that brought them on at first?—William Cadogan, "A Dissertation on the Gout" (Eighteenth Century).

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The greatest part of mankind is angry with the sinner, not with the sin.—Seneca.



## CHOLECYSTOGRAPHY—ITS VALUE AS A DIAGNOSTIC PROCEDURE

By WALTER W. BOARDMAN, M. D., AND ROGER B. MCKENZIE, M. D., *San Francisco*

[Note—The Editorial Councilor, who evaluated this discourse for the editor, pronounced it "a distinct and valuable contribution to medical science," to which the editor would like to add that it is also a contribution to medical literature.—EDITOR.]

*We feel that in tetraiodophenolphthalein we have a safe and reliable method of studying some of the functions of the biliary system.*

*Failure of visualization indicates disturbed function, usually the result of definite pathological processes in the gall-bladder or cystic duct. Such cases we have considered essentially surgical, provided there was no conflict in the assembled findings.*

*Incomplete visualization after the intravenous method indicates some disturbance in biliary tract function, which may be due to pathological processes in cystic duct or gall-bladder. We have felt inclined to watch these cases on medical treatment for a time before advising surgery.*

*Normal visualization indicates a fairly normally functioning biliary system, which, however, does not exclude slight pathological processes, but would certainly seem to contra-indicate any surgical procedures, except with the most definite clinical indications.*

*Caution and experience are necessary in interpreting the results, especially after the oral method. Above all, these findings must be correlated with the clinical findings.*

CHOLECYSTOGRAPHY, the visualization of the gall-bladder by the oral or intravenous administration of certain of the phthalein dyes, is a valuable diagnostic procedure and worthy of more general adoption.

Those interested in the development of the test are referred to the earlier papers of Graham, Whitaker, and Carmen. For our present purpose it will suffice to recall the following facts upon which the test depends. First, the sodium salts of tetrabrom and tetraiodophenolphthalein are taken from the blood by the liver and excreted in the bile. Second, because of the bromine and iodine ions contained in these salts they offer marked resistance to the passage of x-rays even in relatively dilute solutions. Third, the gall-bladder concentrates and stores the freshly secreted liver bile during the inter-digestive periods. Fourth, because of this concentrating and storage function of the gall-bladder, the density of its contents is so increased after the administration of either one of these salts that beautifully sharp radiograms of the gall-bladder are obtainable.

Successful visualization of the gall-bladder by this method is thus dependent upon: (1) A sufficient concentration of the dye in the blood; (2) a liver capable of excreting the dye at a fairly normal rate; (3) a patent cystic duct, allowing the entrance of freshly secreted bile to the gall-bladder; (4) a gall-bladder whose walls are sufficiently elastic to allow for the expansion and contraction necessary for gradual filling and emptying; (5) a gall-bladder capable of concentrating its contents; (6) a gall-bladder whose lumen is not filled with stones; (7) a patent common duct; and (8) a sphincter of Odi that closes the common duct during the inter-digestive periods. Given all these conditions, a satisfactory visualization should always be obtained; on the other hand, a disturbance of any one or more of these conditions may result in a partial or complete failure.

The blood concentration after the intravenous administration of the dye in the usual dosage is always sufficient, but with the oral administration there is introduced the uncertain factor of intestinal absorption. However, from the evidence at hand, it seems probable that failure, due to faulty intestinal absorption, will be of infrequent occurrence. The functional efficiency of the liver must always be kept in mind, but with the large factor of reserve, failure due to this cause should be infrequent and readily recognized. An obstruction of the cystic duct, organic or functional, will naturally result in a complete failure. Again, a gall-bladder with walls thickened and inelastic offers little opportunity for the entrance of the dye-containing bile, and therefore should give no shadow, or, at best, but a faint shadow. Similarly, a gall-bladder incapable of concentrating its contents should cast but a faint shadow or none at all. If the lumen of the gall-bladder is filled with stones it is evident that the concentration of the dye will be insufficient to cast a sharp shadow, and we should expect either no shadow or a faint mottled shadow. An obstruction of the common duct below the cystic duct would seem to promise a failure because of the inability of the dye to get into the already overfilled gall-bladder. Finally, recalling that the gall-bladder fills when the sphincter of Odi is contracted, it seems probable, on theoretical grounds at least, that a temporary or permanent relaxation of this sphincter would be followed by a partial or complete failure of visualization. From this, satisfactory visualization would seem to indicate a fairly normally functioning biliary system, partial or complete failure of visualization, a disturbance of function which should usually be found in the cystic duct or gall-bladder.

The intravenous method of administering the dyes was first used and has the advantage of absolute accuracy of dosage. The disadvantages of the intravenous method are that it usually requires hospitalization, that it calls for rigid asepsis, that there is at times objection to, or at least question about the injection of a considerable quantity of a highly colored solution, and finally that sharp reactions during or following the injection may occur. This last difficulty was encountered in about half the cases when using the tetrabromphenolphthalein, but happily is very infrequent and of very mild degree with the tetraiodophenolphthalein.

On the other hand, the oral administration has the advantage of not requiring hospitalization nor special technique of administration. It arouses little fear in the patients, and although reactions are occasionally encountered they are usually slight and of short duration, consisting of abdominal distress, occasional nausea and vomiting, and sometimes diarrhea.

These advantages clearly make the oral method more generally applicable, and in our later work this has been the method of choice. However, for the present, at least, we feel it advisable to re-examine with the intravenous method all cases failing to visualize by the oral method. By this means we eliminate intestinal absorption as the cause for the failure and place the trouble definitely in the biliary system. Eventually, it may be proven that



Plate 1. Normal gall-bladder four hours after intravenous injection of tetraiodophenolphthalein.

Plate 2. Normal gall-bladder nine hours after intravenous injection of tetraiodophenolphthalein.

Plate 3. Normal gall-bladder twenty-four hours after intravenous injection of tetraiodophenolphthalein.



Plate 4. Normal gall-bladder fourteen hours after oral administration of tetraiodophenolphthalein.

Plate 5. Normal gall-bladder eighteen hours after oral administration of tetraiodophenolphthalein.

this precaution is not necessary, but until such a time our present routine seems indicated.

For the oral method we followed the plan proposed by Whitaker. The patients are given enteric coated pills of tetraiodophenolphthalein in the proportion of one pill for every ten pounds of body weight, with twenty pills as a maximum. As the pills contain 300 mgs. each, this makes a maximum dosage of 6.0 grams. They are also given the following instructions: (1) At 6 p. m. eat a light supper without meat; (2) starting at 8 p. m. take four pills with half a glass of water every half-hour until all pills are taken; (3) while taking the pills, and from then until going to sleep lie on the right side, taking half a glass of water every half-hour; (4) do not break the pills; (5) take no physic; (6) take no food until directed to; (7) report at the x-ray laboratory at 10:30 a. m.

At this time plates of the gall-bladder region are taken, and it is desirable to include one of the entire

abdomen, as this will show the number of pills undissolved and give an approximate idea of the quantity of the dye remaining unabsorbed. Three hours later a second set of plates are taken, after which a full meal is given. Two hours later the final examination is made.

Graham has recently reported the administration of tetraiodophenolphthalein in capsules coated with phenyl salicylate, the dose averaging 0.07 gm. per kilo of body weight, or about 5 gms. for the average adult. This dose is divided into five capsules, which are administered during the evening meal at 6:30 p. m. Food is withheld until after the films are made at 9 a. m. and 1 p. m. the following day. After these films a glass of milk or cup of coffee is given

and further films taken at 5 p. m., and in some cases at 9 a. m. the next day, the regular evening meal being allowed. Water is allowed as desired after taking the drug. This routine is more readily followed than Whitaker's, and we have recently adopted it, although still using the enteric coated pills developed by Whitaker.

For the intravenous method 2.5 to 3.5 mg. of tetraiodophenolphthalein dissolved in 30 cc. double-distilled water and sterilized in boiling water for forty-five minutes or the autoclave for thirty minutes is injected into the median cephalic or the basilic vein. With the tetrabromphenolphthalein it was advisable to administer it in divided doses, but this is unnecessary with the tetraiodophenolphthalein. The patients are instructed to remain in bed and to refrain from food. Plates are taken four, nine, and twenty-four hours after the injection. Food is allowed after the nine-hour examination,



and, if desired, films may be taken an hour or two after this meal.

In examining these plates it is found that after the intravenous method the four-hour films normally show the gall-bladder as a fairly large, smoothly outlined, moderately dense shadow. In the nine-hour films there is an increase in the density of the shadow, but a decrease in the size. Films taken after a meal show a decrease in both size and density, and finally the twenty-four-hour films show either no shadow or a small irregular faint shadow. It is thus possible to study the size, shape, position, and emptying of the gall-bladder, as well as the variations in the density of the shadow. With the oral method we are able to study the same items, but with less exactitude.

In reviewing the results, the cases fall naturally into three main groups:

First. The cases giving a perfectly typical reaction, as previously described. This indicates a biliary tract that is functioning normally, and although it does not exclude slight pathological changes, would seem to exclude gross abnormalities.

Second. The cases in which there is a complete failure of visualization. This negative evidence, especially after the intravenous method, is of the greatest value and indicates a marked disturbance in biliary tract function. This disturbed function is usually the result of definite pathological processes in the gall-bladder or cystic duct—cholecystitis, cholelithiasis or cystic duct obstruction. However, the possibility that spasm of the cystic duct or relaxation of the sphincter of Odi may produce such a failure must be kept in mind.

Third. The cases in which there is an incomplete visualization. Under these we would group the cases in which the density of the shadow seems insufficient, those in which there is no evidence of increased density between the first and second examinations, or in which there is no change in the size of the shadow in the various films, or in which there is either rapid or delayed emptying. Any or all of these findings result from disturbed function of the biliary tract and are probably dependent upon moderate pathological processes. However, until we have had considerable experience caution is advisable in interpreting these variations, especially if the oral method alone is used.

The size, shape, and position of the shadow are of interest, but apparently of little diagnostic importance, and vary with different body types. Irregularities in the contour of the shadow may be of some value in indicating adhesions or pressure. Variations in the density of the shadow may result from stones, papillomata, overlying gas, calcified glands, etc., and must, therefore, be interpreted with caution.

We have used the test in 109 cases up to this writing; in four the dye was given rectally, thirty-eight by mouth, and sixty-seven intravenously. Rectal administration was soon abandoned, as the degree of absorption was too uncertain and considerable rectal irritation was produced by the dye. Of the thirty-eight who received the dye by mouth, seventeen gave normal visualizations, eleven incomplete, and ten no shadows. In this group five cases have been operated upon, three of whom gave no

shadow, and two incomplete visualizations. In all five there was definite pathology in the gall-bladder. Of the sixty-seven intravenous cases, fifteen gave normal reaction, twenty-six incomplete, twenty-five no shadows, and one suffered so severe a reaction with the tetrabromphenolphthalein that no films were taken. Of this group fifteen have been operated upon, seven having given no shadow, seven incomplete shadows, and one a normal shadow. In this latter case there was a definite chronic appendicitis, but the changes in the gall-bladder were very slight. Of the remaining fourteen cases, all showed definite pathology. One was especially interesting in that, although there was no shadow on any of the films at operation, the duct was patent and the wall and mucous membrane practically normal, but there was a solitary stone about 1 cm. in diameter in the gall-bladder. Here the failure in visualization resulted, not from an organic obstruction of the cystic duct, marked thickening of the gall-bladder wall, nor disturbed function of the mucous membrane, but apparently from a reflex spasm of the cystic duct, or a reflex relaxation of the sphincter of Odi produced by the presence of the stone.

Of the unoperated cases, the findings by this method have closely paralleled the conclusions reached by the other methods of study. We hope to keep these cases under observation and report more completely at a subsequent time.

We are convinced that the evidence furnished by this method is, in the majority of cases, more definite and reliable than that furnished by the other special methods of examination. Thus, the indirect and direct evidence of gall-bladder disease noted in the routine barium meal study, the demonstration of a shadow of a supposedly thickened gall-bladder, and the findings by the Lyon's method, although of value, have in our experience been less dependable. Of course, the occasional demonstration of undoubted gall-stone shadows is very convincing, but many stones fail to give convincing shadows, and also many cases of biliary tract disease are uncomplicated by stones.

Here it should be emphasized that no special method of examination should be solely relied upon in arriving at a diagnosis, and the findings by this test must naturally be correlated with the findings resulting from careful clinical study, history, physical examination, etc.

350 Post Street.

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"The physician is in charge of the patient," concludes a report of the Associated Out-patient Clinics of New York. "It is his responsibility to diagnose the disease and to prescribe treatment. He is the head of the unit organized for the benefit of the patient; the social worker is a part of this unit. Working with the physician, fitting her specific qualities into the plan of action, the social worker reaches her greatest usefulness to the patient. Working alone, touching the physician only casually, she cannot function to the best advantage. It is, therefore, highly important that, for the exercise of her primary duty 'to further restoration and maintenance of health', she work under the immediate direction of the physician. It is equally important that the physician should outline the principles for the social worker to follow."

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Choose rather to punish your appetites than to be punished through them.—Epictetus.

## SYPHILIS IN PREGNANCY

By KENDAL P. FROST, M. D., Los Angeles

*The usual type of syphilis to be dealt with in pregnant women is the latent type—i. e., in which no active process is demonstrable and in which there may or may not be a positive complement fixation test.*

*The recently introduced precipitation test, known as the Sachs Georgi reaction, apparently gives fewer false positive reactions than any of the standard modifications of the Wassermann test.*

*Treatment should be vigorous and continued throughout pregnancy until about two weeks from term. Pregnant women usually stand active treatment well.*

*A phenomenon, known as the Herxheimer reaction, is probably responsible for many of the abortions occurring in consequence of anti-syphilitic treatment.*

*If treatment is begun early and carried through the entire pregnancy, there is practical assurance of a healthy child being born.*

Discussion by Lyle G. McNeile, Los Angeles; J. R. Booth, Oakland.

IN a general way the problem of syphilis in pregnant women does not differ from the problem in women in other physiological states. The chief difference is the greater difficulty in diagnosis of a latent syphilis and, on account of the child, the greater urgency for active and prolonged treatment.

A pregnant woman may have syphilis of any type and in any stage—early or late, active or latent. As a rule, this infection is conjugal and has been acquired directly from the mate or through an ovum infected through the spermatozoa. However, syphilis acquired during pregnancy is not unknown. In patients where infection occurs after gestation the liability of infection of the fetus decreases with the duration of the pregnancy, and at eight months it may not occur at all.

The usual type of syphilis to be dealt with in pregnant women is the latent type, i. e., in which no active process is demonstrable and in which there may or may not be a positive complement fixation test. The value of the Wassermann reaction in these patients is very uncertain. Those giving repeated positive reactions probably should be considered syphilitic. The lipid metabolism is, however, affected during pregnancy, particularly cholesterol, which influences the Wassermann reaction. Consequently, without a good history or other findings of syphilis or finding evidence of the disease in the mate, an indefinitely positive reaction should be regarded with the utmost conservatism. Williams states that positive Wassermann reactions occur in 11.2 per cent of all pregnancies; that of these less than half will have syphilitic children. Likewise, one baby in one hundred will have syphilis with the maternal Wassermann reaction negative. He concludes that study of the Wassermann reaction from fetal blood at birth is not worth while, but believes that microscopical study of the placenta is much more valuable—tallying with findings in the child in 80 to 90 per cent of cases. The recently introduced precipitation test, known as the Sachs Georgi reaction, apparently gives fewer false positive reactions than any of the standard modifications of the Wassermann test.

In pregnant women the chief action of the syphilitic virus is the production of abortion or stillbirth. The longer standing the disease, the more liable is there to be a viable fetus, and a healthy child can be born to an untreated syphilitic mother if enough time has elapsed after infection. Organic syphilis

of any form may be present in a pregnant woman, and is only of importance as disease of any given organ may affect pregnancy and as it may demand caution in treatment. Treatment should be vigorous and continued throughout pregnancy until about two weeks from term. Pregnant women usually stand active treatment well.

A phenomenon, known as the Herxheimer reaction, is probably responsible for many of the abortions occurring, in consequence of anti-syphilitic treatment. This reaction is characterized by a sudden flareup of an active syphilitic lesion with intensification of all its symptoms and occurring immediately after beginning treatment. It is most characteristically seen after the first arsphenamin injection when not preceded by mercury or iodide. It can be produced by mercury alone, but is not usual unless an initial large dose is used. The mechanism of the Herxheimer reaction is not definitely proved. Theoretically, the rapid action of the drug kills a large number of spirochetes, liberating their toxins with a resultant local aggravation of the lesion and its symptoms. In the placenta this might cause abortion. It can be obviated by a series of mercury injections or rubs—even for a few days, before arsphenamin is given.

Of course, the earlier in pregnancy treatment is instituted, the better are the chances for the child coming to term and for its being healthy. If treatment is begun early and carried through the entire pregnancy, there is practical assurance of a healthy child. Should treatment not be begun until the latter half of pregnancy, it should be continued in the child after birth. The details of treatment are not important as long as certain principles are borne in mind. The drugs used are powerful and are both kidney irritants. Arsphenamin is also a liver irritant. Since these two organs may become pathologically involved in pregnancy, they should be watched carefully when the pregnant woman is having anti-syphilitic treatment. The urine should be tested for albumen before every treatment, the blood pressure observed frequently, and the bowels should be kept regular. It is usually well to administer a mild saline cathartic the morning of the day for an arsphenamin injection. According to Schamberg, the use of mercury and arsphenamin together is more toxic to the liver than the administration of each in a separate series. It has, consequently, been my habit to give five mercury injections, using the salicylate in oil. Then a series of three to ten arsphenamin injections at intervals of from three to ten days. As a rule, the shorter the interval between treatments the fewer injections are needed. However, during pregnancy it would seem advisable to give the injections at longer intervals and give more of them—e. g., one week apart and give five to eight, depending on the tolerance of the patient. This series would be followed by weekly mercury, beginning with  $\frac{1}{2}$  gr. and increasing gr. ss. each dose until  $1\frac{1}{2}$  to 2 gr. is reached, decreasing the dose if any signs of mercurialism appear. It should not be necessary to give more than one series of arsphenamin followed by mercury throughout the rest of pregnancy. This should insure the birth of a healthy child, but is not sufficient to cure the mother. A couple of months after the puerperium, treatment should be resumed and



continued at least one year to eighteen months after a negative blood has been obtained. The Wassermann reaction should be made at intervals of three months for the next two years, and every six months for the next three.

I believe, however, that should such a patient become pregnant again it is a matter of good insurance to the child that the mother resume mercury in some form during the pregnancy. Discretion is the better part of valor, and although we talk glibly of cures, we do not discharge a patient without a string attached to the prognosis.

523 West Sixth Street.

#### DISCUSSION

LYLE G. MCNEILE, M. D. (523 West Sixth Street, Los Angeles)—For many years the outpatient clinic has been giving anti-syphilitic treatment to all cases in which repeated abortions, stillbirths due to prematurity or to unexplained cause, and cases in which the fetus was macerated, regardless of the Wassermann test. Recently, we have been doing routine Wassermanns on all patients. Personally, I believe that we overlook many cases of latent syphilis, and that these unrecognized cases are responsible for quite a number of fetal deaths. This paper is very timely. The treatment appeals to me as being conservative and effective.

J. R. BOOTH, M. D. (First National Bank Building, Oakland)—Dr. Frost's paper covers the subject in a very interesting way. Although one may not agree with his conclusions in regard to the pregnant and non-pregnant woman, it is instructive.

There is some physiological reaction in the syphilitic pregnant woman which gradually tends to giving birth to a live child, other than the length of time since having the primary inoculation.

At present it is generally agreed that only after several distinctly positive cholesterinized antigen Wassermann reactions can the laboratory findings alone be depended upon. The clinical history is the best diagnosis in the final analysis.

Certain races are more apt to have it than others, and the economic conditions are a decided factor.

The latent syphilitic pregnant woman is the one we have mostly to deal with, and she will probably have all the customary symptoms of the pregnant woman, but they will be exaggerated. This is particularly so of the neuralgias and headache, which is apt to be persistent, and there may be insomnia. There may be some evidence of the infection of the skin, the mucous surfaces, eye, or of the bones.

The patient is not apt to abort, although syphilis was formerly considered the most likely cause, but she will probably go on through to the sixth or eighth month. There will be life until about a week or ten days before miscarriage. All life will cease and a macerated fetus will be born, or she may go on to full term if she is a multipara and give birth to a dead baby, or if she has had several, a live one which may or may not be sickly.

A primary uterine inertia often delays engagement and delivery for hours with final instrumentation.

We have the more difficult problem of diagnosis than in the treatment of them, but there are a few points to consider:

First. It is never too late to begin treatment, or too early after the birth to continue the treatment.

There should be great care of overtreatment, although pregnant women seem to stand treatment exceedingly well. Any syphilitic pregnant woman who has to be frequently examined because of the excessive treatment, rather than the regular observation that we give pregnant women, is getting too much treatment.

When we get a persistent positive Wassermann reaction, do not continue to inject to get a negative. Nor can we accept a negative finding too soon.

I have never seen the Herxheimer reaction, but imagine it can be easily induced. In any event, the suggestion that Frost makes that arsphenirini should be preceded by a series of mercurial rubs, or injections for days, is excellent.

## THE PRESENT DAY ADVANCE IN PLASTIC SURGERY, WITH SPECIAL REFERENCE TO THE CORRECTION OF DEFORMITIES OF THE NOSE AND ABOUT THE ORBIT.

By J. PAUL DE RIVER, M. D., *San Francisco*  
(From the Ear, Nose, and Throat Section, United States Veterans' Bureau)

PLASTIC SURGERY is an ancient art. To Aulus Cornelius Celsus, a Latin physician and philosopher, who is supposed to have lived in the time of Augustus, we owe our first authentic principles of the science. He introduced the Hippocratic system to the Romans, he being known as the Roman Hippocrates. His best work appeared in the *De Medicina*, the first edition of which was published in 1478 in Florence. One may find reference made to the art in the Sanskrit writing, and Susrata in his *Ayur-Veda* (the exact period is unknown) discloses the use of the rhino-plastic method. The art of plastic surgery seems to have waned throughout the Middle Ages and remained practically unknown for a time, finally being revived in the fifteenth century by Branca, a Sicilian surgeon, who established a reputation by building up noses, using the skin of the face. Following Branca are to be found the names of many eminent surgeons throughout the world who have contributed much to the art.

During and following the World War, because of the great influx of clinical material, great strides have been made, due to the various injuries and disfigurements. Many new methods have been tried with varying degrees of success and, due to the untiring efforts of some of the most capable surgeons, this branch of surgery is now a recognized art, applicable to the deserving who have suffered the wounds of battle, and not limited to satisfy the vanity of the less comely. It has taken the art out of the hands of the so-called beauty specialists and placed it on a firm and scientific basis, thanks to the efforts of some of our foremost surgeons, and it serves as a surgeons' contribution to humanity.

It will not be amiss to briefly discuss a few of the fundamental principles which are confronted by those undertaking the field of plastic surgery, and to enumerate a few of the essentials that, if observed, may save one from many of the pitfalls and serve to further demonstrate the underlying principles which lead to success. It goes without saying, that those venturing into the field of plastic surgery should be "disciples of Job," as patience and painstaking are two very essential factors. The desired results cannot always be obtained at one sitting, and the surgeon should be ever patient to wait and give nature a chance; a little at a time, done well, is far better than a gross attempt to accomplish the impossible at one sitting, which oftentimes spells failure and discouragement.

Plastic surgery is not what some may think; it is erroneously believed by many to be a dramatic field filled with glamor. How often does such an idea culminate in tragedy, and the overzealous and hurried surgeon finds that his labors have proved a failure! The temperament of the operator is of importance; here an artistic temperament is the *sine qua non*, for the ability to create and build lends

itself admirably to this branch of surgery. For, in reality, the surgeon but attempts to rebuild as artistically as possible that which has been destroyed or faultily cast by nature. The light touch of the surgeon is a quality which should be developed. The ability to use instruments whenever possible, without resorting to digital manipulation, will often prove a valuable asset, especially in the handling of skin-grafts. The value of tissue conservation by the careful preserving of all tissue is a point that cannot be too largely stressed. Rough handling and tearing of tissue hinders nutrition, favors necrosis, and increases the chances of secondary infection.

We must not, in an attempt to correct deformities, create or leave behind us blemishes equally gross in appearance. We should endeavor to secure careful approximation of raw surfaces with as little tension as possible by using the finest suture material, preferably catgut for cutaneous sutures, as it is the least irritating; and control hemorrhage by pressure when possible, thus avoiding the burying of sutures which may act as a bed for bacteria. (This does not apply to the control of bleeding from large vessels. When necessary, catgut is preferable because it is absorbed.)

Grafts placed in their new position should lie in their new place with the least possible tension, with thorough coaptation of edges. The free use of relaxation sutures should be made (subcutaneous sutures to relieve tension). The lack of proper asepsis and faulty judgment on the surgeon's part are often the cause of a large number of failures. Foci of infection, when existing, should be first dealt with and cleared up before attempting operative procedure. This, I think, holds good for plastics on any part of the body, and it is especially true of plastics about the head and face. One would surely not attempt to perform a plastic operation on the nose when the patient is known to have an infected sinus, nor would one attempt a plastic operation about the orbit when the lachrymal gland or sac is infected. It, therefore, holds good that these various foci of infection should be searched for and cleared up before operation is undertaken. It is also important to search for constitutional conditions, such as syphilis and tuberculosis, and, if possible, to eliminate these conditions with proper therapy. Having observed the foregoing, one can obtain the desired result in the majority of cases.

In the correction of the various deformities of the nose where grafting is essential for the formation of the support of the bridge, a variety of material has been used, all of which have proven unsatisfactory with the exception of two, namely: cartilage and bone. As to which of these is the better, I shall not argue, as both have been used successfully in the hands of certain operators. When bone is used in rhino-plastic surgery, it is usually procured from the rib, tibia or ilium, although I believe a portion of the scapula has been advocated in certain cases, as well as the third digit in other cases where there has been total loss of the nose. The turbinate bones (middle and inferior) have also been used with some success in depressed or saddle nose. In cartilage grafting, the cartilage of the seventh, eighth and ninth ribs, and zyphoid offer the selective sites for procuring the graft. In all in-

stances, whether in the use of bone or cartilage, it is important to preserve as much of the periosteum or perichondrium as possible. The proper approximation of raw surfaces and the fixation of the graft must be assured. This may be accomplished by suture, splints or pressure bandages, all of which have their places. In superficial scars of the nose an attempt should be made to procure a graft from some part of the face, so that it will match as nearly as possible the skin of the nose. An adequate amount of skin can be taken from the upper eyelid, which is an excellent match and leaves no disfiguration following its removal. If the area is too large to allow the removal of a sufficiently large graft from this spot, the temporal graft is fairly adaptable and the shrinkage very slight. If a still larger graft is necessary, I use the outer side of the thigh, following Thiersch's method when possible.

The deformities of the nose encountered are varied: the hooked nose, the overhanging tip, the saddle-backed nose, the African nose, and lateral deformities and exostosis. Each in itself presents a distinct mechanical problem to tax the ingenuity of the surgeon who, before attempting operative procedure, should examine the case from all angles, search thoroughly for the etiological variation from normal, and carefully consider the mode and method for the correction of the deformity. Anatomical variations, due to traumatism, should be separated from those changes resulting from constitutional disease, such as syphilis. Diseased conditions of the para-nasal sinuses should be sought for, and rigid treatment carried out before undertaking operative procedure.

The choice of the anesthetic is of no great importance; local or general may be used with equally good results. However, I frequently leave this question to the decision of the patient. I will briefly outline the operation, as performed under local anesthesia. The operative technique is applicable to all forms of deformities. The patient is placed in a semi-recumbent position and draped for operation. The cilia at the nasal vestibule are clipped with fine scissors. The mucous membrane of the nose is painted with a 10 per cent solution of cocain, to which is added a few drops of adrenalin chloride. The external nose is then painted with tincture of iodine, which is carried well over both cheeks, up between the eyes and down over the upper lip, and the excess removed with alcohol. The next step is the cleansing of the interior of the nose. A swab of pure alcohol is inserted into each nostril and passed over the mucosa. The injections are then made. A one-half of 1 per cent novocain solution is injected subcutaneously beneath the mucous membrane covering the septum. This is done first, on one side of the septum and then on the other. The needle is then inserted in the region of the lateral cartilages, where further injections are made. The attention is next turned to the anesthetization of the external nose, where four injections are made: No. 1, directly over the bridge of the nose; No. 2, directly on the tip; No. 3 and No. 4, respectively, on either side of the nose, well out over the maxillary bones. Although incisions of the nose heal rapidly, the internal route is preferred, as it leaves no scars and no external sutures, which is important



for cosmetic reasons, and the incisions described make it possible to correct all types of defects.

The surgeon begins by making an incision along the pyriform opening of the nose. Beginning at the nasal bone, the incision is carried downward and outward through the mucous membrane and chondro-osseous junction. A periosteum elevator is passed through this incision and inserted between the periosteum overlying the nasal and maxillary bones, and the bones are swept mesially and laterally separating periosteum, subcutaneous tissue and skin from the bone. This freely liberates the entire area, extending from the root of the nose over the nasal bones and superior maxillae. A second incision is then made, beginning at the lower end of the nasal bone; it is carried downward and forward, along the anterior edge of the septum to the tip of the nose. This incision is parallel with the bridge of the nose, and is carried through the cartilage up to the perichondrium overlying the nasal bridge; then, by means of dissection, the perichondrium and soft tissues over the bridge of the nose and lateral cartilages are separated from the underlying bony and cartilaginous septum and lateral cartilages. A third incision is made from one nostril to the other. Starting at the tip of the nose, at the end of the second incision, it is carried backward along the lower border of the quadrilateral cartilage to the nasal crest of the superior maxillary bone and through the mucous membrane and cartilage. The fourth incision is made through the lower lateral cartilage at the point where the cartilage bends upon itself. Having completed these incisions, one is able to correct all types of nasal deformities.

*Saddle Nose or Fallen Bridge*—The operative procedure in this case depends upon the elevation of the nasal bones, together with the filling in of the depression with a graft of either rib cartilage trimmed to the desired size, or a portion of a turbinate bone. A chisel is introduced into the nose, and the nasal bones are detached freely from the frontal process of the superior maxillary bones and from the nasal process of the frontal bone. Elevation is then made sufficiently to raise the bridge of the nose. A piece of rib cartilage or turbinate bone, denuded of all save its periosteum and trimmed to the proper size, is then inserted between the anterior side of the bony septum and nasal bones, and is maintained in place by means of a padded metal splint and adhesive plaster. Within three or four days the graft becomes fixed, and in four weeks, as a rule, there is complete organization.

Humped or crooked nose is corrected by means of the saw and rasp operation. The nasal bones are shaved down to the proper level, and the protruding bony and cartilaginous septum trimmed off with scissors or scalpel. The overlying skin is then molded into position to overcome the widening which frequently results after the removal of the hump. By means of forceps the remaining portions of the nasal bones, with the frontal processes of the superior maxillary bones, are forced inward into the desired position; the splint is then applied externally to maintain them in place.

*Lateral Dislocations*—Before attempting to correct this type of deformity, a resection of the anterior part of the bony septum should be performed.

This accomplished, the nasal bones, together with part of the frontal processes of the superior maxillary bones, can be dislocated by means of a chisel and then swung in the median line. Great care should be taken in exerting side pressure, for fear of possible fracture of the cribiform plate of the ethmoid. The results achieved will depend largely, not only upon the proper observance of asepsis during operation, but also upon the care of the nose during the convalescent period.

In performing plastics about the orbit, I will not touch upon those cases where there has been loss of bony structure, but will limit my discussion to those resulting from the loss of the soft tissues through disease of the part, trauma, post-operative deformities and congenital defects. As to the type of skin graft used in these cases, I will refrain from argument, knowing the value of both detached and pedicle grafts, both of which have their places in the armamentarium of surgery, depending upon the type of case under consideration, and the extent of destruction of the soft parts. However, after observing such men as Dr. John Wheeler of New York accomplish such marvelous results with detached grafts, it has led me, through observance and experience, to yield to this type of skin grafting when possible. When making this statement, I mean whenever there is not too large an area to be grafted, and when the destruction of tissue has been superficial. The reason for preferring the detached graft when it can be used, I will explain.

In the use of dermic and epidermic grafts, the viability of the graft depends principally upon its contact with the underlying raw surface, and if a thorough approximation of surfaces is obtained, the graft will successfully take. The approximation of surfaces is secured largely by the graft being of the proper size, it being retained in place by sutures with as little tension as possible by the application of pressure bandages and, in certain cases, by dental stent. In securing epidermis by the pedunculated method, it is often a difficult task and may be very disappointing, for the reason that, in the use of either dermic or epidermic grafts, the nutrition of the graft is largely dependent upon the pedicle. The pedunculated flap must be thick and the attachment of the graft held in place by sutures throws tension on the vital point, the pedicle, which may, through passive congestion, lead to necrosis and ultimate loss of the graft. The important points are, then, how are we going to secure absolute approximation of raw surfaces and prevent at the same time hemorrhage and the formation of an hematoma. This is important so that the graft will take. First, both the approximation of surfaces may be obtained and the prevention of hematoma avoided by firm pressure-dressings supported by adhesive tape. These pressure bandages should be maintained in place four or five days following the operation, at the end of which time the dressing is removed and the graft inspected. White, anemic places in the graft make one suspicious of necrosis. The second method of securing the proper approximation of surfaces is by the use of dental stent, and is applicable particularly to those cases where there is a desire to skin-graft the conjunctival sac, middle ear, or mastoid cavities. This method is

based on the transmission of the epithelium by the aid of stent. The stent is placed in hot water until it becomes soft; it is then removed and allowed to partly cool, formed to the desired shape and placed in the cavity that is being grafted. An impression is made of the cavity and the stent is allowed to harden; it is then removed from the cavity and the graft is spread over the stent, completely covering the stent, raw surface outward, and making sure that there is no curling of the edges of the graft. The stent form, with the graft covering, is then gently slipped into place and an approximation of raw surfaces is obtained. This is allowed to remain for varying periods of from one to three weeks, depending on the cavity that is being grafted.

As to the site preferable for procuring the graft in plastic surgery about the orbit, it applies here as it does in any part of the face. The skin from a nearby region furnishes a better match than does the skin transplanted from remote parts of the body (this does not apply to grafting in orbit, ear, or mastoid cavities). Therefore, in small defects, such as cicatricial ectropion or the like, the dermic graft from the upper lid, as suggested by Wheeler, is preferable because of its likeness to the surrounding parts and there is no resulting deformity following the removal of the graft. Next, comes the temporal region which offers a very good match, although some allowance should be made for shrinkage. In epidermic grafts, the outer portion of the thigh or the flexor side of the forearm are the sites of selection.

In outlining the various operative procedures for plastics about the orbit, I will follow largely the technique of Wheeler, used by me. I will first describe the operation for the correction of a simple cicatricial ectropion, a condition that is frequently encountered by all of us, especially by those practicing ophthalmology. In this condition the lids, more commonly the lower lid, are pulled away from the globe as a result of scar tissue, and it frequently happens that only one lid is involved, usually the lower lid.

The technique of operation for the correction of the resulting deformity is as follows: An incision is made parallel to the distorted lid margin; all scar tissue is thoroughly dissected away and hemorrhage controlled by pressure. It is necessary here, after completing the primary dissection, to dissect up small portions of epithelium on the upper and lower lid margins, carrying mattress sutures through the raw surfaces. These sutures are passed through small pieces of cut rubber tubing, overlying the skin of both upper and lower lids near their margins. The sutures are tied so as to secure apposition of the opposing raw surfaces. This results in the formation of adhesions between the two lids which causes a support of the lower lid. The skin graft is then taken, preferably from the upper lid. Sufficient skin can easily be obtained from this site to make an ideal inlay of true skin. No allowance need be made for contraction when this graft is used.

A fusiform or conilunar-shaped design is convenient, and is removed with a small scalpel or cataract knife, avoiding handling the graft as much as possible. When the graft is removed, all fragments

of subcutaneous tissue are snipped off with the scissors and the graft is set in place. Fine horse-hair or paraffin silk sutures are used for maintaining it in the proper position. A pressure dressing is applied, first using a small piece of rubber tissue impregnated with sterile vaseline over which are placed gauze fluffs, which are held in place by adhesive plaster and a pressure bandage. The dressing is removed after the fifth day and the graft cleansed with a mild solution of boric acid. The sutures are removed at the first dressing. The wound is dressed every other day for the period of a week. In about three weeks after operation, light massage with sterile vaseline is advised. The adhesion between the two lids is allowed to remain for two or three months, after which it is cut with scissors, leaving no deformity.

It frequently becomes necessary to restore the cilia line, or a part of the cilia line of one of the lids. In this case, the preferable way for securing a graft is from the nasal end of the undersurface of the eyebrow or, if the whole cilia margin has been lost, to slit the eyebrow by a longitudinal incision and to remove half the brow or sufficient quantity to completely restore the cilia line. In suturing the graft in its new position, it is of advantage to invert the graft so that the hair on the graft will match, as near as possible, the cilia of the opposite lid. The same precautions are adhered to in this operation, as is previously described under the correction of cicatricial ectropion.

It frequently happens that the surgeon is called upon to restore an obliterated eye socket. The operation for the correction of this deformity I will briefly describe. After thoroughly cleansing the cavity and preparing the field of operation, the lid margins, if adherent, are separated by an incision. In dissecting, the operator should endeavor to separate the lids from the orbital contents. The dissection must be kept superficial and avoid carrying the dissection back into the orbital tissue, which often causes failure. Dissection should be carried temporally and below, well under the orbital margin, as the graft must adhere to the periosteum and anterior aspect of the orbital margin. On the nasal side the dissection should be carried to the anterior crest of the lachrymal groove and well up to the orbital margin above. The caruncle should be preserved, if not already destroyed, as the graft will adhere to the posterior surface of the caruncle and furnish it with a permanent lining. In the division of the tissues above, the dissection should be carried beyond the orbital rim, if necessary, to the roof of the orbit, before placing the graft, and the place of cicatricial and granulation tissues should be removed. The lid margins should not be too thick; if necessary, remove a portion of the tarsus, allowing enough tarsus to remain to support the cilia. At this stage, dental stent is immersed in hot water for a period of thirty seconds, then removed and allowed to partly cool. It is then slipped into the socket, where an impression is taken of the cavity; after allowing time to harden, it is removed. The operator now turns his attention to the securing of the skin graft. Epidermis is probably the most satis-



factory tissue for lining, the cavity being free from an excess of oily secretion and hair.

A Thiersch graft is taken from the lateral aspect of the thigh. Enough skin is taken to completely cover the dental stent, raw surface outward, making sure that there is no turning in or curling of the edges. The average graft usually measures from  $3\frac{1}{2}$  to 4 inches in length by  $3\frac{1}{4}$  inches in width. The form, with the graft covering, is gently slipped into the socket, the overlapping edges of the graft being placed forward; the lids are then closed and a pressure bandage, reinforced with adhesive tape, is applied. The dressing is changed in from five to seven days, the form being left in place for twenty-one days, when the stent is gently removed, allowing the graft to remain behind. If there has been a successful taking of the skin-graft, the result will be a permanent eye socket completely lined with epidermis, which furnishes a fair stump for an artificial eye. The artificial eye may be put in any time within two or three weeks after the removal of the stent.

At times we are called upon to correct deformities of the upper lid, either resulting from a wound or associated with ectropion. Usually, in these deformities there is an involvement of the skin, conjunctiva, muscle, and tarsus. When deformities are not too large, the punched-out or notched area can be repaired very satisfactorily by the "halving operation."

All scar tissue is excised, the tarsus is identified and cut clean, so as to give a firm approximation of the edges; equal amounts of tarsus are removed at the upper and lower margins. The skin and orbicularis are cut so as to form a flap on one side and a rectangular area of tarsus is exposed on the other side. If the eyeball has been removed, a canthotomy must be performed and a portion of the external canthal ligament severed, to release the tarsus. This done, the tongue of skin is trimmed enough for adjustment, and a small triangular piece of skin may be removed above to avoid puckering. The conjunctiva and tarsal flaps are first sutured, passing a mattress suture through the flaps and tying, after passing it through a small piece of rubber tubing. Sutures are introduced in the skin to give apposition to the skin flaps. The mattress sutures are removed on the fourth day, and the skin sutures on the sixth. The tarsal wound and skin wound should never be in the same position, but should be placed so that there is no lapping, for here lies the secret of success in this operation.

In concluding, we may briefly sum up the important points to be considered in the application of plastic surgery for the correction of the various deformities of the nose and about the orbit:

1. The surgeon should search for the underlying causes of the deformity.
2. He should be familiar with the anatomy of the part to be corrected.
3. Thorough attention should be given the importance of primary eradication of all foci of infection.
4. The constitutional condition of the patient

should be thoroughly understood, and where syphilis or tuberculosis is found proper therapy instigated.

5. The avoidance of creating new disfigurements in an attempt to correct those already existing.

6. Judgment in selecting sites for securing skin grafts; the advantage of securing skin that matches the surrounding parts when possible.

7. The control of hemorrhage by pressure rather than by burying sutures.

8. The avoidance of roughly handling the tissues by either digital or careless instrumental manipulation.

9. Rigid asepsis and surgical technique.

10. Patience on the part of the operator. The surgeon should not force too much at one sitting. Nature should be given a chance. Also remember the dictums of Gillies, "Time is the greatest ally of the surgeon."

861 Sutter Street.

## TYPE TREATMENT OF PULMONARY TUBERCULOSIS

By SIDNEY J. SHIPMAN, M. D., *San Francisco*  
(From the Department of Medicine, University of California)

*The rational treatment of pulmonary tuberculosis should be based somewhat upon the type of disease present.*

*Broadly speaking, there are two predominant types of pulmonary tuberculosis—the exudative and the productive.*

*The onset of the exudative type of pulmonary tuberculosis is usually stormy, and the intensity is determined largely by the area or areas involved.*

*The course of the exudative type when retrogressing is often surprisingly uneventful. The temperature may fall rapidly, soon the pulse may be normal, and the weight excellent.*

*The course of the productive type if retrogression occurs is, as one might expect from the pathology, marked by a slower fall in temperature and pulse, with occasional subsequent elevation.*

*The differential evidence furnished by the roentgenogram is of the utmost importance, provided the plates or films are technically good.*

*Local and general rest, taken as far as possible in the open air, with a high-caloric diet, forms the foundation of all pulmonary tuberculosis therapy.*

*Exercise is rest in its negative phase—it is merely the withdrawal of an equivalent amount of inactivity.*

*These principles in the treatment of pulmonary tuberculosis are primary; all others are secondary.*

*DISCUSSION by Chesley Bush, Livermore; Lewis Sayre Mace, San Francisco; J. Tracy Melvin, Porterville; Ralph L. Byrnes, Los Angeles.*

THE rational treatment of pulmonary tuberculosis should be based somewhat upon the type of disease present. It is no longer sufficient to treat all cases of pulmonary tuberculosis merely as minimal, moderately advanced or advanced cases. The type, as well as the extent of the disease, demands consideration.

Broadly speaking, there are two predominant types of pulmonary tuberculosis—the exudative and the productive. Certainly, aside from minimal cases or frankly massive pneumonias, it is difficult to find lesions of any extent wholly exudative or wholly productive. Nevertheless, the one or the other frequently predominates and largely determines the clinical course of the disease. Let it be understood, therefore, that the terms "exudative" and "produc-

tive," as here employed, refer merely to the pre-dominant characteristic of the individual case.

#### THE EXUDATIVE FORM

The exudative form begins with a coagulable exudate and an infiltrate of leucocytes and cells from the alveoli, atria, and bronchiols. The unstable nature of this material makes aspiration into new areas easy and, consequently, favors extension. Indeed, changes, either progressive or retrogressive, might be expected to take place quickly from the very nature of the process. If retrogression occurs there may be:

1. *Resolution.* This may occur before much damage has been done to neighboring tissue. The exudate may be liquified, partially expectorated, and partially borne away by the lymph stream. The result is functional restoration. This process was undoubtedly recognized by Virchow, and more recently has been demonstrated experimentally in animals by Gardner. The latter remarks: "It is not yet demonstrated that human pulmonary tuberculosis, being, as it usually is, an autogenous reinfection upon sensitized soil, most often with virulent organisms, can likewise heal by resolution. The steps in the proof of such a process are lacking, but any experienced clinician has seen the lesions of pulmonary tuberculosis disappear before his eyes, leaving no trace that he can detect by x-ray films or by physical signs." Lacking the steps in this positive proof—surely very difficult to obtain in human beings—we are yet justified on clinical and roentgenological grounds in claiming the use of the word "resolution." If the process is not, in fact, resolution, it so closely resembles this change that, for clinical purposes, we may assume the two to be identical.

2. *Partial resolution, with a change to the productive type.* Resolution may take place slowly and be incomplete. The lesion partially disappears. Some of the exudate is removed, but a proliferation of the fixed tissue or lymphatic elements begins and the focus changes character.

3. *Caseation followed by healing.* The cells lying in the alveoli nearest the center of the focus break down as a result of toxins elaborated by the tubercle bacilli, the neighboring alveolar walls are destroyed, partly by toxins, partly by pressure. The center of the focus becomes a homogeneous, caseous mass. Complete restoration of function is impossible, since actual lung tissue has been destroyed, but the caseous material may inspissate and be encapsulated in time, or finally may even calcify.

This third process is partly progressive and partly retrogressive in character. Purely progressive changes may take place as follows:

4. *Caseation followed by cavitation.* Caseation occurs as above described. Ferments liberated by the destruction of leucocytes tend to liquify the caseous material. Excavation follows, leaving a fresh, thin-walled cavity, whose extent depends upon the extent of the original caseous focus.

5. *Rapid extension, with early death.* Fresh areas are constantly involved with the production of an overwhelming toxemia, resulting in early death.

#### THE PRODUCTIVE FORM

The productive form is probably a reaction to a smaller number of bacilli. Thus, in the beginning, the foci are small and coalesce to form clinically recognizable tubercles. Epithelioid cells appear early and, through the coalescence of several of these, the typical Langhans type giant cells are formed. It is said that the greater the productive character of the lesion, the greater the development of the giant cells, both as to size and number of nuclei. The following changes occur:

1. *Fibrosis.* Through fibroblastic proliferation a fibrous nodule develops, with more or less hyaline change, well encapsulated.

2. *Caseation* may occur at the center of the tubercle, only to become encapsulated later.

3. *Slow extension*, with constantly occurring new areas of involvement.

4. *Ultimate massive scarring* with deformities, or firm-walled cavities.

These types may often be made out quite easily in individual foci. In a lung which may contain any number of foci the problem is infinitely more complex. A lung containing typical, apparently arrested productive foci, may harbor one or more areas of tuberculous pneumonia—exudative foci. Exudative foci may gradually become fibrous. Various combinations of the above factors may produce an almost infinitely complex picture in which no predominant character remains. The amount and virulence of the infecting agent, the manner of spread, the local and general, and the inherited and acquired resistance all unite to vary the reaction. The latter remains simple, in direct proportion to the predominance of one or more of the above factors, acting over a longer or shorter period of time.

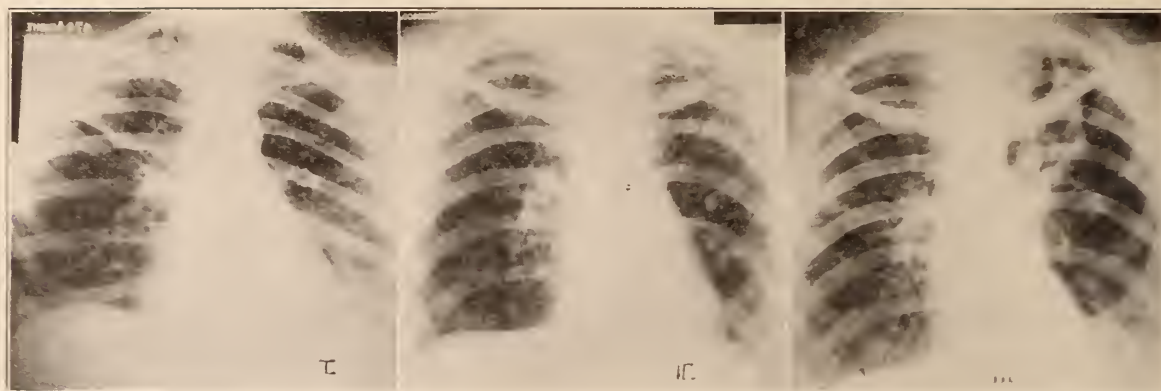
#### DIFFERENTIATION

The onset of the exudative type of pulmonary tuberculosis is usually stormy, and the intensity is determined largely by the area or areas involved. There is usually a well-marked p. m. temperature. The onset of the productive type, however, is more apt to be insidious and there may be little or no elevation of temperature.

The striking points of difference (points of extent, not intensity) on physical examination are the circumscribed signs in relation to the marked symptoms in the exudative form, as compared to extensive physical signs accompanied by comparatively few symptoms in the productive form. Rales are a valuable indication; when present they are very moist in the exudative type and are usually abundant over the involved area. Indeed, if physical signs are present at all in the exudative type, they are usually quite definite, intense, and sharply circumscribed.

The course of the exudative type when retrogressing is often surprisingly uneventful. The temperature may fall rapidly, soon the pulse may be normal, and the weight excellent. Cough and expectoration are in direct relation to the amount of tissue destruction. If retrogression does not occur, the course is generally as stormy as the onset. The temperature shows a well-marked p. m. rise, the pulse is





Productive type

Exudative type

Same case as shown in Plate II, six months later. Note resolution in right upper.

rapid, and the usual symptoms of pronounced toxemia are in evidence. Sudden sharp but transient elevations of temperature in a patient whose course otherwise is satisfactory usually mean slight fresh areas of invasion.

The course of the productive type if retrogression occurs is, as one might expect from the pathology, marked by a slower fall in temperature and pulse, with occasional subsequent elevations. These are usually slight and do not necessarily mean the invasion of sound tissue. Progression is evidenced by the usual symptoms of toxemia gradually increasing.

The differential evidence furnished by the roentgenogram is of the utmost importance, provided the plates or films are technically good. The early exudative lesion, involving, as it usually does, one or more lobules is somewhat larger than the early productive focus (really a collection of foci) and, because of its almost liquid or semi-solid character imperceptibly blends into the surrounding normal lung tissue or with another focus. The center of each focus is, of course, thickest and casts the heaviest shadow. Since this fades out gradually toward the periphery, a large number of such foci form a collection of soft more or less blended shadows of extremely poor definition. Massive reactions may occupy one or more entire lobes. Caseation naturally accentuates, and excavation lightens the shadows. The productive foci are more sharply defined than the exudative; they are more strikingly set off from the surrounding normal lung tissue, and though they may be of many sizes they do not blend so nicely. They are often nodular or linear.

During the progress of the case the roentgenogram manifests striking changes. In the exudative form, resolution is evident from the total disappearance of the foci. Caseation, by an accentuation of the central portion of the shadow, which may become divisible into two components, the inner caseous mass and the outer granulations. In the productive type, as retrogression occurs, there may be a general hardening of the shadows, although since the central portions may caseate or simply become firmer through fibrosis, it is impossible to differentiate the latter change through the roentgenogram.

Finally, the fact should be stressed that all available means of differentiation should be employed in

classifying individual cases, and in the application of this classification to treatment.

#### TREATMENT

Local and general rest, taken as far as possible in the open air, with a high-caloric diet, forms the foundation of all pulmonary tuberculosis therapy. Exercise is rest in its negative phase—it is merely the withdrawal of an equivalent amount of inactivity. These principles in the treatment of pulmonary tuberculosis are primary; all others are secondary. It remains to be seen whether the differentiation of types may not be useful in the application of rest.

As generally employed, bed rest ceases a few days or a few weeks after the pulse and temperature have become normal, depending upon the extent or intensity of involvement and the clinical judgment of the physician in charge. The latter may be a radical or a conservative, although it should be said that the conservatives are generally the more successful in the handling of this disease. Nevertheless, keeping a patient in bed indefinitely because of fear of a relapse is certainly not justified.

In consideration of types and the application of treatment to them, two fundamental principles should be borne in mind: First, that resolution is favored by rest; and second, that fibrosis or scarring is facilitated by gentle movement.

The exudative type of lesion is the typical inflammatory type of reaction in the lung. More or less resolution is to be expected. *Restitutio ad integrum* is only possible through resolution. Hence, resolution, as complete as possible, should be our aim in dealing with this type of lesion. Thus, rest should be made as absolute as practicable until that amount of resolution which will occur with any degree of rapidity has taken place. This is best learned by means of frequent roentgenograms, taken monthly if possible.

A consideration of the pathology of the disease has shown that these changes should take place quite rapidly in either direction. For this reason rest is still more essential in this type of case, since any movement favors extension of the semi-liquid alveolar contents and spread of the disease.

With the productive type the situation is somewhat different. After the symptoms of toxemia have disappeared it must be assumed the foci are

no longer throwing toxic products into the circulation. Scarring should be in progress. Nevertheless, retrogressive changes must be expected to occur slowly, and complete restitutio ad integrum is known to be impossible. At this stage the benefit of motion lies in its stimulus to scarring, and the danger in the fact that it may disrupt the delicate walls of granulation tissue and thus produce new foci. Except in pneumothorax, and usually not even then, all motion is not inhibited. The normal respiratory movements never cease, and in the average case furnish the ideal stimulus to this type of lesion. Under the influence of gentle exercise, such as slow walking, the effect is enhanced and retrogressive changes further favored, provided always that no symptoms of toxemia be present.

The dangerous type of movements are those sudden distorting efforts, such as violent coughing, lifting objects, and straining at stool. Many a patient owes his unsatisfactory condition to uncontrollable coughing, which may account for repeated extensions, and even be an indication for pneumothorax.

In view of these facts, it seems highly desirable to attempt to determine the predominant characteristic in cases of pulmonary tuberculosis, if this be possible. Rest and exercise may then be used, with their effect upon the pathological condition in mind. It is true that there are many other factors involved, such as auto-tuberculinization and a host of others, but they will be found to conflict in no way with the fundamental principles involved.

It will be noted that the chief difference in treatment of the two types is one of time. Graduated exercise is employed in both—earlier in the productive than the exudative type. Moreover, it is believed that the pathological changes in the exudative type, as recognized by frequent stereo-roentgenograms, should be one of the chief factors in allowing tuberculous patients exercise, or in prolonging bed rest beyond the time when a consideration of symptoms alone would suggest that it might be abandoned.

The employment of secondary measures has purposely been ignored as outside the scope of this paper. It should be mentioned in passing, however, that tuberculin (as the term is ordinarily understood) should never be used in the exudative type of pulmonary tuberculosis for reasons which should be sufficiently obvious.

Small photographs of roentgen films of the chest are generally unsatisfactory. Nevertheless, three are herewith presented, in the hope that they may illustrate to some extent the foregoing discussion. Plate 1 shows the productive type of lesion, involving chiefly the right upper and the left lower lobes. There is a good deal of pleural thickening on the right. Plate 2 shows the exudative type of lesion, involving chiefly the left upper and the right upper lobes. There are several cavities in the left upper. The apparent annular shadow in the right upper is an artifact, due to the configuration of the exudative foci. Plate 3 shows the same exudative case six months later. A partial pneumothorax has been induced on the left, in the hope of obliterating the cavities, an end which was later accomplished, in spite of the adhesions which are seen in this film.

Note particularly the complete disappearance of many of the exudative foci in the right upper.

380 Post Street.

#### DISCUSSION

CHESLEY BUSH, M. D. (Livermore, California)—Doctor Shipman has made a very timely exposition of the exudative and proliferative types of lung tuberculosis. As he states, the two types are usually mixed, but where one type predominates recognition of the type assists in treatment. In fact, those who have had long experience in the handling of tuberculosis have unconsciously grouped their patients in just this way.

That tuberculosis apparently can heal by resolution is one of the outstanding facts brought to us since we have been checking our cases with continued use of roentgenograms. This has been brought to our attention rather startlingly at Arroyo. We have seen it in both adults and children. Anatomically, the resolution may not be perfect, but the clearing of lung tissue is striking. The old dictum "that a tuberculosis of the lung, once showing on an x-ray plate always shows" is no longer true. When a patient comes to us now with the history of having had, years ago, rales in a lung, and of having had at that time a diagnosis of tuberculosis, we no longer doubt the ability of the former diagnostician when a physical and x-ray examination fail to reveal anything.

We have been telling patients for years that the sickest individual often makes the quickest recovery, quicker than one with slight clinical symptoms. We have seen this happen again and again. It is the exudative case versus the proliferative case.

There is no doubt in our mind that many cases of the exudative type can be turned into cases of the proliferative type by careful treatment. This may explain the fact brought out by young Trudeau in his study of cases at Saranac Lake that many patients have an increase of rales with clinical improvement.

The time to begin exercise with any patient calls for the nicest discrimination and judgment on the part of the physician. While productive type cases may begin exercise with less danger, it is always well to emphasize the fact that the supervising medical man must be mighty sure of his classification, and then always to make the error on the safe side—that of continuing rest too long.

LEWIS SAYRE MACE, M. D. (240 Stockton Street, San Francisco)—Doctor Shipman has done well to remind us that a knowledge of prognosis is necessary before prescribing treatment. The diagnosis of tuberculosis is easy—much easier than prognosis, since for prognosis one must be able to differentiate between the many types of disease which may be present.

The individual resistance I believe to be the most important factor, though it must be remembered that the virulence of the particular strain, as well as the dosage or amount of infection, are also variables which must be considered. With three variable factors in every case of infection, it is evident that there are many different types to be considered from the standpoint of prognosis and treatment, and that a diagnosis of tuberculosis, instead of being the end, is really the beginning of the task.

In our present state of knowledge I believe that more harm is done by failure to recognize the type of disease the patient is suffering from than from a failure to make a correct diagnosis. It is a very frequent experience to see someone with a rapidly progressing, virulent type of tuberculosis in which recovery is out of the question condemned to leave a comfortable home and the loving care of relatives, in the hope that a distant climate and strange regime will accomplish the impossible.

From an anatomical standpoint, the recognition of type is very difficult, for, as Shipman states, many kinds of pathology are present in each case.

It will be much easier, I believe, for the physician to approach the question of prognosis and treatment from the standpoint of the resistance of the patient and the virulence of the infection than to attempt to recognize various so-called stages of the disease or differences based on anatomical pathology.

J. TRACY MELVIN, M. D. (Porterville, California)—We are under obligations to Doctor Shipman for one of the



clearest and most condensed portrayals of the pathological changes which occur in a tubercular lung which has appeared for a long time. He has made very definite the picture upon which practitioners must base their diagnosis, their prognosis and, to some extent, their treatment.

He shows the problems to be very different from the conceptions of some years ago, when we only had to consider if the patient was or was not actively tubercular.

The point for reiterated emphasis is, that the clearer and more accurately we visualize the pathology of a given case, the more rational and successful our treatment may be; realizing the constantly changing and infinitely complex variations of type which each patient may manifest during the various periods of the history. Here, too, looking backward, we find reasons for many of our unexpected results from climatic treatment years ago.

Among the thousands of actively advanced tubercular patients who came out to Colorado and the Southwest some thirty or forty years ago, a very definite proportion would stage complete and permanent recovery under our advice to "get out and rough it"; and we paid but little attention to those whose downward progress must have been accelerated by this advice. We did not at that time distinguish between those types where the exudative processes were the dominant factor, for whom absolute rest might be the only possible chance for an arrest, and that other class where the proliferative changes had slowly proceeded and who were able, under the stimulation of a new and favorable environment, to stimulate this process to such an extent that a further fibrosis progressively ensued to a symptomatic recovery.

Has not the tendency recently been to place too much reliance on the postulate of continuous rest, long continued, regardless of type, when our older experience showed us clearly that there is a type and stage which needs the stimulation of definite exercise to make the best improvement possible in a given time?

RALPH L. BYRNES, M. D. (1501 South Figueroa Street, Los Angeles)—Doctor Shipman's paper differentiating the exudative and the proliferative types of tuberculosis is indeed well presented. He has by no means attempted the discussion of the blending of these types, but has stressed the differential pathology of each type of infection. The methods of treatment and the reasons for that particular treatment in each type of case are substantiated. He has spoken of the early resolution with recovery similar to a recovery from pneumonia (coccus infection). One such case came to my attention recently. This young woman (21 years of age) had a typical exudative type of tuberculosis of the right upper and upper portions of the middle lobes which cleared in less than two months' time; however, after taking a very bad cold the pathological and clinical findings were approximately those of the first examination. The lung is again clearing, as in the first instance.

As has been mentioned in the discussion, the earliest form of treatment of tuberculosis by exercise was probably, in part, founded upon the successful results of the exudative type of infection, but the earliest exponent of the exercise theory, Brehmer, considered the small heart as a predisposing factor; therefore, to obviate the cardiac handicap he prescribed graduated exercise. Rest treatment came as a gradual development, based upon observation; and, as the knowledge of tuberculosis increases and further differentiation in type is made, the individual treatment will become more specific, as Dr. Shipman has so capably pointed out.

## SPEECH DEFECTS AND DISORDERS

By MABEL FARRINGTON GIFFORD, *San Francisco*

### DISCUSSION

**S**PEECH defects and disorders up to the present time have suffered much from misunderstanding and neglect; in fact, from a misapprehension and lack of differentiation between the nervous speech disorders and the purely physiological speech disorders, much positive harm has been done.

At present there seems to be an awakening realization of this big problem, as evidenced by the fact that a number of the larger cities in the United States have inaugurated a speech correction department into their public school system. In 1916 San Francisco started its speech correction department under the guidance of Mrs. Mabel Farrington Gifford, and today its ninety-six public schools each have their daily speech drill period in segregated groups for stutters and for articulation and foreign mispronunciation cases. A free speech clinic, too, is maintained by the University of California Medical School once a week on Saturday mornings, to which are referred any persons who come under observation in the hospital, as well as obstinate cases from the schools.

### DEFINITION

Speech defects must be classified into two groups—the nervous speech disorders and the articulation defects.

Under nervous speech disorders come (1) stuttering, (2) stammering, (3) cluttering, (4) nervous hesitation. Stuttering and stammering are spasmodic actions of the speech muscles, which manifest themselves visibly or audibly in varying degrees. Stuttering, as understood in the United States, is a rapid repetition of the initial sounds of words, i. e., "K-K-K-Katie." Stammering is illustrated by the phrase, "I c——an." For the sake of simplicity, and because in Europe stammering is differently defined (namely, as an articulation defect) we shall use the term *stuttering* only to represent either form, as illustrated. Cluttering is the slurring over or omission of certain parts of words as the result of rapid, choppy utterance. Nervous hesitation is agitated, faltering speech.

Under articulation defects we have lisping, substitutions of sounds, infantile speech, the unformed speech resulting from cleft-palate defects, and foreign mispronunciation. These articulation defects may be traced to hare-lip, feeble or very short upper lip, overshot jaw, narrow palate, sluggish palate, cleft palate in varying degrees, nasal obstructions, tongue-tie, or very irregular teeth. Lispings of the sounds s-z-sh-zh-ch-j is caused by a protrusion of the tongue and substitution of the *th* sound. Substitution of sounds is illustrated by the saying of *tan* for *can* or *Sharlie* for *Charlie*. Infantile speech is baby-talk which the child has never outgrown. Cleft palate has, of course, a mechanical cause, and is the result of sound rushing from the nose. Foreign mispronunciation is mainly due to the fact that foreign national speech habits are different from our own, and each nationality has its own difficulties to overcome in the learning of English. The Spanish, for

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"The skilful in medicine," wrote Dr. William Cado-gan, two hundred odd years ago, "and learned in nature, know well that health is not to be established by: medicine; for its effects are but momentary, and the frequent repetition of it destructive to the strongest frames; that if it is to be restored, it must be by gently calling forth the powers of the body to act for themselves, introducing gradually a little more and more activity, chosen diet, and, above all, peace of mind, changing entirely that course of life which first brought on the disease: medicine co-operating a little."

Compare that with displayed "news" and "new discoveries" of today, and we get an interesting line on human progress.

instance, use their lips very energetically and their tongues rather sluggishly. This is the reverse of the English manner of speaking, and the Spanish, in order to enunciate English correctly, must have their attention called to these facts, and must then practice assiduously.

#### HISTORY

The nervous speech disorders, at present looked upon as psychic manifestations and not at all as physiological or mechanical disturbances, have a history, which, due to the fact that much human mental suffering has been left unalleviated for so many years, is tragic in its fruitlessness. Mr. Alfred Appelt, in his book entitled "Stammering and Its Permanent Cure," has given a very complete outline of the history of stuttering. For the purposes of this article we shall but touch upon the main points.

Many cases of stuttering are noted in ancient history. From 1716, at which date we find the first active medical investigations into the subject, until the beginning of the twentieth century, we find stuttering attributed progressively to unsoundness of the muscles of the speech organs; to weakness of the soft palate, uvula, and root of the tongue, and immobility consequent upon such conditions; to abnormal formations of the tongue (to be cured by operation); to malformations of the tonsils and uvula; to incorrect respiration, spasm of all the organs involved in the formation of sounds and syllables, spasm of the respiratory organs, spasms of the glottis which then impart themselves to the muscles of the tongue, face and throat, spasms of the articulatory muscles; and to tetanus of the muscles connected with respiration and voice production.

When, after years, these conceptions of purely physical causes were recognized as false, the function of the brain began to be considered as part of the problem. It was thought that a disproportion between cerebral influence and spinal action might cause the trouble. In 1866 its primary cause was placed entirely in the psychic sphere—that of the will. Later still, it was considered caused by an abnormal working of the central nervous apparatus, lack of confidence and control; then as a psychoneurosis based on a debility of the nerves involved in the action of speech in which each paroxysm of stuttering is induced by psychic stimuli; and finally as a purely psychic ailment, in the center of which stands "dread of speaking." The view which placed the cause of the impediment in the organs of speech themselves may now be looked upon as definitely abandoned.

Cures for all of these supposed causes were attempted. Among them were change of climate, change of diet, avoidance of alcoholic drinks, administration of purgatives, the use of honey, salt and sage. Operations then became the vogue, particularly the cutting of the root of the tongue, which in some instances ended fatally, and in every instance proved to be unjustifiable. Later came didactic or pedagogic methods aiming, by means of instructions and exercises, to recover the control over the organs of speech. There were time-beating methods, vocal exercises, reading exercises, breathing, intonation. These artificial means proved of help for a time, but were not lasting in their effects.

Next the use of electricity was tried, along with certain medicines and cool demi-baths to attack the abnormal innervation which was considered the cause of the trouble. The duration of this treatment was about 140 days, and statements as to its permanent cures and lasting improvements are rather conflicting.

The application of medicine was never successful. Electric treatment as well was futile, and operations were little short of criminal. Because medical men were unsuccessful in their attempts to cure, the work was gradually taken up by non-medical men, many of them charlatans with no education, experience, or insight into the nature of stuttering.

Up to the end of the last century there were no further developments in treatment than those already mentioned, and in the light of present knowledge the tendency is to reject all tiresome exercises which aim at a systematic training of the organs of speech, since these have shown themselves to be superfluous.

Out of the turmoil of opinion and theory the fact has gradually become established that stuttering is a nervous speech disorder, psychologic in origin, and the spasmodic manifestations are only the external effect of deep-seated emotional conflicts. It has been definitely established that severe shocks and emotional conflicts occurring in very early childhood, usually entirely unknown to the parents, and, of course, uncomprehended by the child, remain as subconscious memories for many years, and may continue to disturb the speech function, which in itself is perfect, until such time as corrective measures are applied. It is safe to assume that a predisposing cause is present in stutters; in other words, that their nervous systems, and particularly their motor speech centers are weaker than those of normal individuals. Nearly every child in its very early years goes through emotional experiences and shocks or frights, but fortunately not every child is afflicted with a nervous system so unstable that its speech is affected.

It is not far-fetched, this theory of the psychic origin of stuttering and hesitant speech, when we consider that even normal speech may reflect a momentary emotional state of mind. We know that embarrassment causes a hesitating reluctant speech, excitement an increase in the tempo, anger an incoherency, joy a buoyancy of speech readily observed and never mistaken. Under certain conditions the stutterer is worse; strangeness and excitement usually aggravate the disorder, quiet home influences and regularity tend to lessen it, and every stutterer has days in which he goes along so smoothly that he cannot believe his own ears—proof conclusive, of course, of the fact that there is nothing whatever wrong with his speech mechanism.

#### TREATMENT

Treatment for the nervous speech disorders is a combination of physiological speech drills; that is, a co-ordination of the breathing voice and articulatory muscles, with an emotional adjustment brought about through practice in building up the ideas of poise and firm control. Part of the process is that of changing the old association of ideas and substituting constructive thought habits. To accomplish



this end, suggestion and auto-suggestion is used. While certain phases of this re-education are comparatively new, so much improvement has been made in a psychologic way that we feel we are nearer to the solution of the problem than ever before. The talk of many former stutterers treated in this manner bears witness to the fact of their very great improvement, and, in many cases, of their cure.

Treatment for articulation cases is mechanical, as follows:

*Harelip*—Operation first, and later the attempt to make the upper lip more flexible through exercises.

*Feeble or Short Upper Lip*—Lip gymnastics and the attempt to increase control.

*Overshot Jaw*—Gymnastics for the lips and tongue until the proper occlusions can be easily made.

*Narrow Palate*—Training of the tongue to find the positions which will bring the correct sounds.

*Sluggish Palate*—Palate exercises and exercises for producing resonance.

*Cleft Palate*—Where there has been no operation, the fitting of a plate with a false soft palate into the patient's mouth offers far greater possibilities for normal speech upon proper speech instruction than does an operated case. This is because the muscles on each side of the cleft adjust themselves to the soft palate and help produce a normal voice. In many cases of surgery there is not sufficient tissue to allow for the stretching upward and backward, which is necessary for closing off the naso-pharynx, and in spite of speech re-education the speech remains poor.

*Nasal Obstructions*—Exercises or operation, depending upon the nature of the obstruction.

*Tongue-tie*—Surgery, and a few gymnastics of the tongue to make it flexible.

Very irregular teeth, from which may arise either substitution of sounds or lisping from malocclusion. This condition calls for straightening of the teeth by an orthodontist, and enunciation exercises.

210 Post Street.

**Health in Relation to Citizenship in Urban and in Rural Communities**—John A. Ferrell, New York (Journal A. M. A.), summarizes his paper as follows: Public health is one of the major community interests. Community funds wisely used for health service yield large returns. The scope of the health service will vary with problems, resources and the public conscience, but in all cases should include basic activities. In the interest of economy and efficiency, the political unit should be large enough to permit the employment of a well-rounded unit of trained full-time personnel. The cost of the service should be assumed jointly by the state, county, and towns on an equitable basis. The rural community is economically handicapped, so that unaided it cannot finance health and other services approaching in adequacy that of urban communities. It is being abandoned to an alarming degree. The urban community cannot enjoy its present prosperity and civic advantages indefinitely unless its outlying country which furnishes foods, raw materials and markets is afforded similar advantages. The urban and rural communities have a common interest in the equalization of taxation and also of facilities for health and for educational, social and economic welfare. This should be accomplished through the larger political unit, such as the state. Experience in this direction has been encouraging. The plan should be extended.

## Clinical Notes and Case Reports

### DIAGNOSIS OF ABSENT URETERAL CALCULUS

REPORT OF A CASE

By EDWARD S. POMEROY, M. D., Salt Lake City

Correlation between the roentgen ray, the cystoscope, and the history with symptoms of a case may well illustrate how a condition which has been present and has corrected itself may be demonstrated.

On August 10, Mrs. X. applied to the Salt Lake County Hospital for relief from urgent, severe abdominal pains. She was admitted, and because of severe tenderness over the left kidney region, together with painful urinary symptoms, it was requested by the surgeon who examined her that she be cystoscoped. This was done at once, without going further into the history of the case. The bladder wall appeared normal, except, as seen through the cystoscope, the left ureteral orifice was large, and appeared to have been torn, and was pouting, patulous and inflamed. This ureter admitted a No. 6 ureteral catheter with no difficulty, which passed readily without the slightest suggestion of any obstruction up to the renal pelvis. Ten cubic centimeters of a 25 per cent solution of sodium bromide were injected carefully into the renal pelvis, and a pyelogram was made.

A study of the pyelogram showed nothing abnormal with the calyces, but the pelvis of the kidney was moderately dilated, and the ureter was dilated all along its course from the pelvis downward to the bladder wall to the size of about fifteen millimeters diameter.

Only three possibilities as to the etiology of such a dilatation presented themselves for consideration: (1) Ureteral stricture; (2) nerve lesion; (3) calculus.

The first could be eliminated from consideration because of the extreme readiness with which the large catheter passed through; no nerve lesion need be considered, as was shown by a physical examination and history at this time. The cystoscopic picture suggested that something had been forcibly expelled through the ureteral orifice, and that something is usually a stone.

Subsequent cross-examination of the patient brought forth the information that she had felt something pass from her bladder when she had urinated just prior to the cystoscopy. She was kept in the hospital several days, all kidney tenderness quickly subsided, and the patient had no further trouble.

315 Judge Building.

### TRANSFUSION WITH UNIVERSAL DONOR A FATALITY

H. E. BUTKA, M. D., Los Angeles

The occurrence of reactions, ranging from mild to severe, following transfusions are of occasional occurrence. Type IV donors are frequently used where speed is essential and where typing of patient involves loss of time or is technically difficult. Reactions following use of universal donors, with recipient belonging to another group, are somewhat more frequent than when the same group is used. Fatalities, however, are rare indeed.

*Report of Case*—Mrs. L. B. Age 54. First consulted her present physician August 30, 1925, at which time she was so weak it was impossible for her to get up and about. Entered hospital September 3, 1925. Remained quiet for two weeks, during which time daily injections of iron cacodylate and other remedies to increase hemoglobin were given.

Patient's present condition developed rather gradually until within a short time of her entrance. Her hemoglobin was recorded as 35 per cent, method not stated. Two million one hundred thousand red cells were present.

Physical examination revealed a small uterine fibroid, the probable cause of her continued uterine bleeding.

On September 17 I was requested to give her a transfusion. Patient's physician volunteered to give the blood. He belonged to Type IV—Moss grouping, and has been used by me several times before, both for Type IV patients and others. Patient was not typed.

Due to condition of veins at elbow (thickening of walls and fibrosis, with some thrombosis), it was necessary to cut down on patient's veins. Multiple syringe method was used. Patient complained slightly after three or four syringes of blood were transferred, but the alarming symptoms immediately cleared up, with the exception of a tired feeling. At the conclusion of transfusion a very extensive rash developed over the lower extremities, thighs and back, up to the shoulders. This was of urticarial type and responded fairly well to injections of adrenalin. During the next three days, hemorrhages occurred from the wound in the arm, from the uterus, bladder, stomach, and bowels. Very severe jaundice developed. Patient vomited all food and fluid. Blood count on September 21, four days following the transfusion, revealed a hemoglobin of 30 per cent, with a red cell count of 2,500,000, the leucocyte count being 22,000 cells. Patient continued to grow worse and died September 23, six days after transfusion.

*Comment*—I am at a loss to account for the reaction in this patient. The blood count of 2,500,000, following the transfusion, would indicate that not all of the blood injected was destroyed. However, we have no other logical reasons for the patient's death, except that she had been failing rapidly during the few weeks prior to her entrance into the hospital. In this case we stopped the transfusion when symptoms began and until they disappeared, then proceeded with caution. The occasional occurrence, however, of a reaction of this kind would indicate the necessity of caution, and the cross-agglutination of the patient's and donor's blood when possible.

## PRIMARY CARCINOMA OF THE LIVER: REPORT OF TWO CASES

By ROBERT WILLIAM LANGLEY, M.D., *Los Angeles*  
(From the Medical Department, Los Angeles General  
Hospital, and the Selwyn Graves Memorial  
Dispensary)

[*Note*—As originally submitted, this report was drawn upon a larger scale and executed in for greater detail. Not having space for it thus, at our suggestion Doctor Langley submitted the following briefer discussion of his subject. If any essential data are omitted from this abstract, the author will be glad to furnish them to any interested reader.—EDITOR.]

The following cases are submitted because of the presence of several unusual findings. Both were patients at the Los Angeles General Hospital. The first was under my observation for some time before entering the hospital, and the other is submitted through the kindness of J. F. Percy:

Mrs. L. W. Age 26½, white, American, who was referred August 11, 1924. Chief complaint swelling in the upper abdomen, moderate loss of weight, weakness and soreness in the abdomen. History of complaint: Three and one-half years ago the patient complained of pain in the upper abdomen on the right side, and went to a doctor who operated on the suspicion of gall-bladder trouble. The patient states that the doctor who operated removed the appendix and said that she had a cancer of the liver. No other work was done at this operation. X-ray treatments were advised and started at this time, and continued every twenty-one days for six months. Not much improvement was observed under these treatments, but since that time the patient has been enjoying good health. The tumor has been present constantly, and during the last six weeks moderate pain and tenderness have been present. Patient is slightly nauseated after eating. Seventeen pounds loss of weight has been noticed during the last three months. Past complaints: No serious illnesses

in the past history, and the only operation is that mentioned above.

*Family History*—Father and mother living, and well. No history of tuberculosis, cancer or other serious illness in the family. Married seven years, has one healthy child 6 years old. No other pregnancies. Menses regularly. Venereal disease denied. Regional history reveals nothing of importance. The physical examination is unimportant, except for the following:

*Abdomen*—Old, healed, right rectus scar. A tumor mass is felt in the right hypochondrium which is distinctly nodular, and extends 9 cm. below the right costal border, apparently fixed in position, and appears to be associated with the liver. One nodule extends 2 cm. to the left of the midline. The spleen is not palpable, and no other tumor masses are felt in the abdomen.

*Vaginal Examination*—Uterus slightly retroverted, tubes and ovaries not felt. Laboratory examination: Urine, sp. gr., 1018. Reaction acid, albumen one plus, sugar negative, microscopic negative. Blood and spinal Wassermann negative. Hemoglobin, 55 per cent; w. b. c., 7300. Differential normal. Feces: No blood, mucus, parasites, or ova seen.

Complete x-ray examinations of the chest and gastrointestinal tract reveal the following important details: The stomach is moderate in size, with its lesser curvature above the level of the iliac crest. It is displaced greatly to the left and downward. It appears to be regular in outline and without filling defect. The cap opens immediately, and there is shown a well-filled regular duodenal cap. Other observations are irrelevant.

After the above work was completed the patient was advised to enter the hospital for further study, and was admitted to the Los Angeles General Hospital August 16, 1924, where the above work was repeated and the findings confirmed. Additional blood Wassermann, spinal Wassermann, and blood chemistry tests were made at the hospital, all with negative findings.

### PROGRESS NOTES

*August 23*—Patient placed on iodides and mercury, which were not well tolerated. Referred to the Malignancy Board for advice as to deep x-ray therapy. *August 28*—Patient has developed jaundice. Weight, 98 pounds. Placed on a forced-feeding diet. Urine shows traces of bile, albumen, and one plus diastetic acid. *September 18*—Jaundice increased. Patient's weight, 97½ pounds. Deep x-ray therapy advised. Temperature, 100 daily. *November 1*—Received four hours x-ray over the liver. *November 14*—Feels somewhat better. Temperature 99 daily. Urine bile three plus. Albumen one plus. *December 12*—Discharged from hospital feeling fairly comfortable, to return later for additional x-ray treatments. *January 24, 1925*—Patient re-entered hospital. Temperature 104, pulse 110. Moderate ascites present. No edema of extremities. Two thousand six hundred cc. yellow fluid withdrawn from the abdomen. Examination shows fluid to contain a few red blood cells, occasionally lymphocytes and endothelial cells seen. Culture sterile. Patient has a moderate cough, and examination reveals a few moist rales at the base of both lungs. No evidence of consolidation found. Jaundice has increased slightly since the patient left the hospital in December. Tumor mass apparently not increased. Tenderness not increased. Urine bile 2 plus, albumen 3 plus.

During the following month, abdominal paracentesis was done three times, about 7000 cc. being withdrawn each time. On February 25 the patient was sent home in the ambulance. Death occurred on March 8.

An autopsy was performed by Clayton R. Johnson on March 8, and the following is an abstract of his positive findings:

*Anatomical Findings*—Neoplasm, primarily in the liver carcinomatous of the peritoneum; ascites; metastatic neoplasm of both lungs; hypostatic congestion of both lungs. Probable cause of death: Carcinoma of the liver.

At the suggestion, and through the kindness of J. F. Percy, I report also the following case:

Mrs. M. O. Age 21, white, entered the hospital December 3, 1923, on the surgical service of Dr. Percy.

*Present Complaint*—Swelling in the upper abdomen, anorexia, vomiting, and pain in the abdomen. History



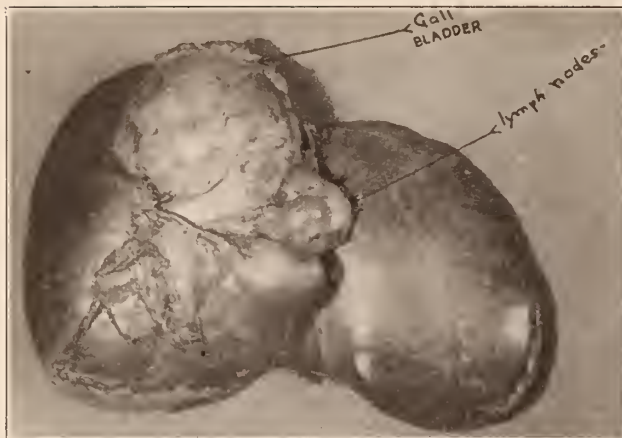


Fig. 1. Inferior surface of the liver showing the gall-bladder dislocated by the tumor mass. Case 1.

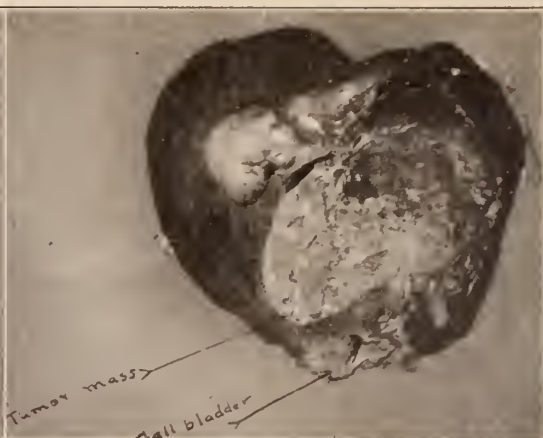


Fig. 2. Section through liver showing tumor mass. Case 1.

of complaint: Patient first noticed the tumor six months ago, while carrying a child. The tumor was in the upper part of the abdomen and was not painful at that time. After four months she went through a normal pregnancy, and since then (two months) the tumor has grown quite rapidly. At present there is moderate pain about the upper abdomen. Nausea and vomiting have been present during the last few days only, and is increased on the taking of food. Loss of weight has not been particularly noticeable. Appetite has been fair until the last few days. Bowels regular. No urinary disturbance. Past illnesses: Appendicitis four years ago. No other serious illnesses. Marital: Married four years; two children living and well. No other pregnancies. Menses always regular; no dysmenorrhea. Last period two weeks ago. Family history: Mother and father living and well. No history of cancer or other chronic disease in family.

**Physical Examination**—Reveals nothing of importance except: Abdomen—A large palpable mass occupies the epigastrium, and extends from the costal margin to the umbilicus and laterally to each nipple line. It is firm, hard, definitely nodular, and somewhat movable. Manipulation causes the patient some pain, which she describes as a pulling sensation. No other tumor masses are felt. Laboratory findings are without importance.

December 4, 1923, the patient was operated upon by Percy, who made an upper right rectus incision. The following is taken from his operative record: "The left lobe of the liver is involved in a firm lobulated mass of coalesced tumors of yellow, partly necrotic masses, the size of chestnuts. The general mass is roughly 20 cm.

in diameter. The head of the pancreas is enlarged, hard and fixed. One nodule 1 cm. in diameter is found in the omentum. Recent soft blood clots are found free in the abdomen. A section was removed from the mass in the liver and the mass in the omentum by means of the cautery. The liver mass was brought out through the incision and the incision closed in layers, leaving the liver mass outside of the abdomen.

Laboratory report of the specimens submitted is as follows: The specimen consists of an irregular oval-shaped piece of tissue measuring 4 x 3 cm., the surface of which is greatly charred. It is moderately firm, and on section shows a small amount of what appears to be liver tissue almost entirely replaced by homogeneous gray, slightly opaque tumor nodules in the form of lobules which are fairly well circumscribed.

**Microscopic Diagnosis**—Carcinoma of the liver.

After operation the patient began to fail rapidly, and died December 16, 1923.

#### DISCUSSION

The diagnosis of primary carcinoma of the liver is made essentially by exclusion. The history, symptoms, physical findings, must be of such a nature as to exclude the more common diseases, such as tuberculosis, syphilis, hydatid cyst, chronic gall-bladder infections and diseases, giving rise to secondary changes in the liver. All cases of liver diseases in which an hypertrophy or hyperplasia is a predominating feature must of necessity have many symptoms in common, namely, obstructive symptoms, giving rise to jaundice, ascites, localized pain, tenderness. The differential points must be found elsewhere and may depend on the history, degree of chronicity, effect upon the nutrition character of the tumor mass, whether smooth or nodular, effect upon other organs, such as enlargement of the spleen, effect upon the blood picture, reaction to therapeutic tests.

The occurrence of primary carcinoma of the liver is not common. It is particularly uncommon in patients under 40 years of age. More unusual, still, are we able to elicit a history of this condition extending over a long period. One of these patients lived three years and four months after the condition was recognized at operation. The surgeon felt reasonably certain that the patient had a cancer, and he writes as follows: "I do not remember whether I removed the appendix or not, but I do remember that there were a great many nodules on the liver. It looked very suspicious of being malignant." (Operation November 17, 1921.)

The first patient here described lived less than twelve weeks from the onset of the ascites. The persistent and thorough treatment by deep x-ray for six months following the operation was undoubtedly the factor in checking the growth of the tumor and in prolonging the life of the patient in Case No. 1.

#### SUMMARY

While primary carcinoma of the liver is a rare clinical entity, still its occurrence should be suspected even in the young. Post-mortem examinations should always be made in cases of liver enlargement where the cause is the least obscure.

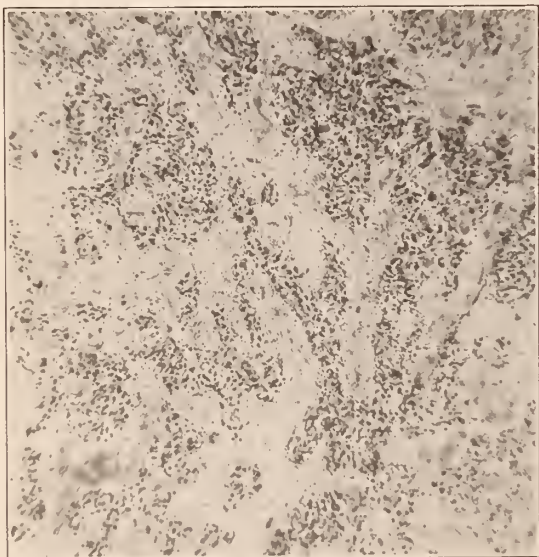


Fig. 3. Microscopic section showing tumor mass. Case 1.

## EDITORIALS

### NARCOTIC LAWS AND PHYSICIANS

National and state narcotic laws are being enforced with such superlative stupidity that the honest practice of honest scientific medicine by honest, adequately educated physicians is becoming increasingly more hazardous.

Medical opinion is practically unanimous in this conclusion, and what is more important, doctors everywhere are becoming restive under the autocratic rules of tax collectors as to what a doctor may do for his patients. The intelligent element of the voting public is securing some effective but tardy "education," which may in the course of time produce effective results.

Since the decision of the Supreme Court that our chief narcotic law is—as the doctors always have claimed it to be—purely a revenue measure, sane people in all walks of life are waking up to the surprising fact that we are trying to regulate a health problem by money-getting laws administered by money getters for moneyed reasons. People at last are beginning to realize, as one prominent non-medical citizen recently said, that our government is making huge profits out of a vice.

Laws, rules and regulations are now so numerous that an honest, conscientious doctor often must choose between his duty to his patient and the possible consequences of the law. This to such an extent that many doctors refuse to take chances with tax collectors, under-cover agents and what-not, by doing for sick people what scientific medicine endorses as the best treatment. Few doctors can carry in their minds the numerous things laws and painfully numerous bureaucratic regulations require of them every time they give or prescribe a dose of narcotic drugs.

One of the most illuminating analyses and digests we have seen of the Federal narcotic laws has been recently published—with their endorsement—by the Los Angeles County Medical Association. Every doctor ought to have a copy of this 45-page booklet on his desk, and he ought to study it. In order to pay part of the expense of publication, a price of 25 cents is charged, and the book may be obtained from the Los Angeles County Medical Association, 736 South Flower street, Los Angeles.

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#### DANGEROUS DOLLARS

A well-known wealthy California business man writes:

"About two years ago, my wife wanted a marble-sized cyst removed from the fleshy part of her arm. Our family doctor said that, while it was a simple matter, he thought Doctor X Y Z, a well-known surgeon, could probably do it more skilfully, with a smaller resulting scar. Surgeon X Y Z removed the thing in his office. He deadened the pain with an injection, and we were in his office possibly a half-hour. There was one visit to his office some days later, and we have not seen him since. I was surprised a few days later to receive a bill for \$1000. At

first I thought of contesting the amount, but we decided to pay it and use our influence thereafter to protect our friends against falling into the hands of such a grafter. *We have tangible evidence of our success, which we interpret as a public service.* The greatest consolation we have had out of the experience is that, when explained to our family doctor, he commended our course."

Another successful business man relates his experiences with Doctor A B C, who sent him a bill for \$5000 for a simple uncomplicated operation for removal of the appendix. Another victim writes: "What's getting into you doctors, anyway? You can't all be grafters, but unless you take up and solve some of your problems and, in particular, shear some of the dirty crooks who wear the cloak of your noble calling, it is not difficult to foresee dire consequences."

And so it goes, and not all the complaints by any means come from victims. Decent doctors are as much exercised over the apparently increasing number of medical Ponzi's as are other people.

One of the leading physicians of California writes:

"I have been very much impressed in the last several years by the very high fees which some men in our profession are charging, and I have seen a very goodly number of lay citizens shake their heads at the medical profession. The impression is growing that the reason we all of us don't do this kind of thing is simply because we do not dare. It certainly would be a dreadful state of affairs if the lay public got it into their heads that the medical profession was in one sense a group of 'hold-up artists.'

"Not long ago one of my banker friends told at a dinner party of this experience with a doctor:

"It seems that a wealthy easterner, an elderly man who came West every winter, went down with pneumonia. A well-known doctor was called in, and he in turn called another doctor in consultation. The old gentleman died. The banker was called upon to make arrangements to take the body back East. The illness lasted about two weeks, and the bill for the first doctor was \$15,000 and the bill of the other was \$5000. The banker had been instructed to settle up all debts, and he went to these doctors and they smiled him out of their offices at the mention of a reduction in the fee. He then went back to them with a compromise offer, of something like \$5000 and \$1000. Again he was smiled out of their offices. He then went to a very well-known lawyer and said, 'get these birds,' and I think they settled on the basis of \$500 and \$250, respectively.

"I confess I do not see the way out, but I do believe that a bit of editorial comment from time to time, dealing with the significance of the practice of the art of medicine and its ethical and social obligations, as contrasted to the purely financial considerations and motives, might be of real service in holding some of the younger men, who hear about these expressions of extensive commercialism, along the decent path of proper medical practice.

"Pardon my sending you all this stuff, but I know your deep interest in all things that concern the welfare of the medical profession, and I feel



that you will give the matter thought, and at a suitable time such expression as may seem proper."

Another prominent ethical doctor writes:

"Recently, while visiting in a small California city, Doctor John Doe told me (giving names and dates) that one of his old friends, Mr. Duplex, had been under the care of Doctor Catchem. The only positive findings were three dead teeth, but there was laboratory work done each day and a 'vaccine made from the blood,' and a bill rendered for six weeks' services of \$7500. The doctor told the patient that he was on his way to Europe to lecture before the Royal College of Physicians, and on his return would deliver a series of lectures at the Mayo, etc. He suggested that Mr. Duplex put himself in his care and he would keep him well for \$2500 a year—this meant monthly examinations. He stated that Mr. A paid him a retainer of \$15,000 a year and that Mr. B, the banker, paid him \$10,000 a year, and so on.

"The whole process sounds like the routine of a quack. If it is true it is a very lucrative business. I am curious to know whether this form of 'health insurance' is being carried on in the state of California, and if so if it is ethical. I am not sending this letter in the form of a complaint, but merely to satisfy my curiosity and to relay the information to Dr. John Doe. I am sorry to bother you with the matter, but I thought you would be more interested in it and have information about these doctors."

These are isolated instances of panhandling, to be sure, and we have others much worse than these, but difficult to disguise without destroying the point aimed at and too disgraceful to publish, even were it expedient to do so. When our collection of these depressing narratives gets a little larger, we propose to tabulate them for the information of the profession. It seems that the majority, if not all these commercialists, have certain common and obvious characteristics: They are amazingly ego-centric, pompous, and invariably severely destructive critics of their own organizations and the "moss-covered ethics" that their more worthy colleagues love to honor. The most stupid characteristic of these gentry is that they act as if they thought their well-covered heads also made invisible their slimy coats of muck, whereas their doctor acquaintances know them, and more and more of their patients are finding them out.

Is there a cure for this "cancer" that is getting a hold upon a humanitarian profession? Of course there is, but it may require some fearless surgical work without too much anesthetic. We don't want to wash dirty linen in public, but only the sunshine and breezes of the great open places will remove some odors and bleach certain materials.

#### "MINERAL WATER" PROPAGANDA

The "playing both ends against the middle" type of mineral water propaganda, now so active, is likely to prove a Frankenstein to some wily promoters. Several of the newer type of press agents, propagandists for pay, publicity brokers or what-not appear simultaneously to have adopted the policy of carrying dignified, restrained advertising in such good medical magazines as they can induce to accept it and, *at the same time* have been running

in the public press the wildest of wildcat propaganda for the particular mineral water they are promoting. That is old as a patent medicine trick, but is only now coming into its own as a method of fooling people about so-called mineral waters.

"Mountain Valley Water" from Hot Springs, Arkansas, for instance, is advertised in a dignified manner in certain scientific literature. But in the public press it is said to be indicated in quantity consumption for "dizziness," "throbbing temples," "headache," "backache," and a lot of other symptoms common to many infirmities. Other waters—many of them—both of the imported and home varieties, make the most ridiculous and untruthful claims, particularly as to "purity" and medicinal virtues.

The exercise of a modicum of intelligence is convincing that *there is no such thing as pure water*. All waters are "mineral waters" in the sense that they contain minerals, usually a mixture of them in small amounts. Distilled water is the nearest approach to "pure water," but even that is not *pure* except when extraordinary methods of distillation are employed.

"Pure spring water" and similar phrases catch the eye and make an appeal to the unwary. All natural water absorbs the soluble matter through which it filters. Excluding extraneous contaminations, practically all water is a diluted solution of such chemicals as it has been in contact with, plus parasites and bacteria. So-called "mineral waters" differ from average river, city, or well water, chiefly in the fact that they have absorbed more chemicals and medicines than has ordinary tap water. Their alleged medicinal and special health values, therefore, depend upon the presence of the same chemicals that can be bought pure or in precisely the same amounts and combination contained in "mineral waters," at any drug store.

The approach now being so actively promoted by many mineral water salesmen is precisely that of the patent medicine vendor who mixes the same chemicals in his "laboratory" and usually puts them in solution in distilled water because this is his safest vehicle, and sells them for fancy prices.

As a matter of fact, many so-called natural mineral waters are made artificially by adding the salts to ordinary water.

There are certain mineral waters promoted only upon a dignified, intelligent, and truthful basis. *The contents of the water are listed, but no exaggerated healing claims* are made for the sodium, potassium, and other drugs they contain. Physicians often prescribe such waters, but they do so because the particular drugs the water contains are indicated for the particular patient, because the mineral water is a convenient and palatable method of giving the drugs, and for several other perfectly good reasons.

However, it is growing particularly difficult to distinguish between good and bad in mineral waters, and we are likely to see some interesting public reactions if propaganda continues in the stupid way in which much of it is now being conducted. To medical editors the problem is a hard one. The only safety appears to lie in a policy of accepting advertisements only of those waters of known inno-

cent content and which are not *unduly exploited in advertising of any kind anywhere*.

Whenever the promoters of a "mineral water" claim its purity they are ignorant or handle facts lightly. And whenever mineral water promoters advertise their product in the treatment of symptoms or diseases, they are *practicing medicine for pay* and only escape the consequences of their acts by imperfections in the law.

CALIFORNIA AND WESTERN MEDICINE welcomes truthful advertisements of reliable "mineral waters" whose copy with us, as well as all advertising copy of any kind published anywhere, is truthful in its statements. There are not many such waters on the market. Most of them prefer the cheap patent medicine faker type of propaganda because—well, read Barnum's life.

#### HEXAMETHYLENAMINE AND SYSTEMIC ANTISEPSIS

Hexamethylenamine is still exploited in the treatment of all kinds of infectious conditions and diseases, among which pneumonia, scarlet fever, typhoid, meningitis, and anterior poliomyelitis receive their share of enthusiastic attention. According to the best evidence, the drug itself is inert. The mechanism of its antiseptic action depends on formaldehyde liberation in the presence of free acidity, a condition which has generally failed of demonstration in most systemic infections. Accordingly, a scientific basis for the alleged beneficial action in infectious diseases would appear doubtful. However, in pneumonia, Lord has demonstrated that extracts of, and certain areas in, the lungs possess an acid ( $\text{pH} = 5.4$  and  $6.0$ ) reaction, a condition that would be favorable to hexamethylenamine therapy in this disease. On the other hand, dilution of the drug, the abundance of protein for combining with any possibly liberated formaldehyde, the relative impermeability of the consolidations, acting as obstacles to free diffusion, are some considerations among others which would tend to reduce the antiseptic efficiency. In any case, an adequate concentration of the formaldehyde would be necessary for antiseptic action. Such a concentration might conceivably exist momentarily and exert its effect, and yet not be demonstrable by the ordinary tests for free formaldehyde. Moreover, the sensitive colorimetric tests cannot be applied to blood or colored tissue extracts. Clinically, it is even less satisfactory to appraise the value of an antiseptic, especially in a self-limited disease such as pneumonia. Hence, the problem of determining a basis for the antiseptic action of hexamethylenamine resolves itself into a study of its fate in the body and under experimental conditions most favorable for the liberation of formaldehyde. It has remained for De Eds of the Pharmacological Laboratory of Stanford University to make such a comprehensive study of the drug under different conditions *in vitro* and *in vivo*.

Using human subjects, De Eds found the quantitative excretion after small and large doses to be variable, ranging from 32 to 85 per cent. The excretion lasted from thirty-three to forty hours, and was not influenced by the diuresis, fluid intake and dosage of the drug. Administration of sodium bicarbonate, for neutralization of the acid in the alimentary tract, raised the quantity of hexamethylenamine

excreted in urine. Accordingly, it appeared that a part of the unexcreted portion could be accounted for by decomposition (liberated formaldehyde, which is not absorbed) in the alimentary tract. However, the irregularity of excretion after bicarbonate in different subjects suggested that a portion, about 14 per cent, of the drug undergoes decomposition in the body, which is practically tantamount to saying formaldehyde liberation. Incubation experiments *in vitro* showed that a small though unmistakable quantity of hexamethylenamine was decomposed with formaldehyde liberation in alkaline buffer mixtures, but this was markedly reduced in the presence of serum protein. Blood obtained from the hearts of animals injected with large doses of the drug did not show evidences of formaldehyde liberation, as indicated by changes in the urea (from ammonia, a hydrolytic product) and formic acid (oxidation product of formaldehyde) contents, even when the bloods were rendered acid ( $\text{pH} = 6.6$ ) by induction of fatal asphyxia. Human subjects receiving 1 and 2.5 gms. doses of hexamethylenamine excreted from 0.005 to 0.0154 gms. formic acid, amounting to from 0.26 to 0.31 per cent of the total drug administered, in complete collections of their urines. It appeared, therefore, that formaldehyde, as a precursor of formic acid, was liberated in the tissues. However, De Eds estimates that even if these entire quantities of formic acid had remained in the blood the concentration of formaldehyde represented by the subject receiving the highest dose (2.5 gms.) of hexamethylenamine would be about 1:500,000, which is only about one-twentieth of that necessary for antiseptic action. At any given moment during the liberation there was probably much less formaldehyde. He concludes that there is no good basis for the use of hexamethylenamine, orally or intravenously, as a systemic antiseptic in various infectious diseases and localized infections. The excreted formic acid is too small in amount to account for the alleged benefits on the basis of the very low concentrations of formaldehyde that might be liberated as an intermediary product to or precursor of the formic acid.

Thus, another disappointment in hexamethylenamine must be registered. Other scientific investigations have indicated its total worthlessness as a uric acid solvent, as a diuretic and as an antiseptic for ammoniacal urines of cystitis. Let it be reiterated that the therapeutic usefulness of hexamethylenamine is limited to preventing the growth of bacteria in the urinary tract, as, for instance, before or during instrumentation and in cystitis, providing the urine remains acid, otherwise no benefit is to be expected. Its use by mouth and intravenously in systemic and localized infections, with the object of producing an antiseptic action in the blood and tissues, lacks scientific foundation and is unjustified.

Hanzlik, P. J. and Collins, R. J.: "Hexamethylenamine," *Arch. Int. Med.*, 1913, 12:578.

Hanzlik, P. J.: "The Liberation of Formaldehyde from Hexamethylenamine in Pathologic Fluids," *J. A. M. A.*, 1916, 72:295.

Lord, F. T.: "Relation of Pneumococcus to Production of Acid in Fluid Culture Mediums and Reaction of the Pneumonic Lung," *J. A. M. A.*, 1919, 72:1364.

De Eds, F.: "Fate of Hexamethylenamine in the Body and Its Bearing on Systemic Antisepsis," *Arch. Int. Med.*, 1924, 34:511.



## - The MONTH with the EDITOR -

Notes, reflections, extracts from correspondence, comment upon medical and health news  
in both the scientific and public press, briefs of sorts from here, there and everywhere.

There's an important health problem bound up in the subject of that suppressed university debate.

The health problem will be a much larger one if these young Demosthenes succeed in suppressing the family as a factor in civilization as effectively as President Campbell suppressed the debate.

However, the ways of suppressors are hard.

"Have you had your tonsils and adenoids rayed?" will soon be the fashionable greeting, instead of "Have you had your tonsils and adenoids out?"—Medical Standard.

As was to be expected an assortment of mail-order "doctors" and would-be doctors, calling themselves "nutrition specialists"—through paid newspaper advertisements—are inviting distracted parents to write to them for the "genuine" advice they need to safely feed their loved ones.

When advertising doesn't pay it has a short life—so we say, poor babies!

"The more interest the individual layman takes in medicine, the greater becomes his demand for high-class service," believes Lucius F. Donohoe (Journal New Jersey Medical Society). "The present generation of physicians," continues Doctor Donohoe, "has not only greatly lengthened the life of the individual, through the prevention of many diseases, through research work, and practical elimination of preventable disease, but has actually increased the public demand for better medical service."

"A wide-awake, blue-eyed" professor—"doctor"—of an Eastern university has electrified a lot of sub-morons with the statement that sleep is a habit—an unnecessary habit—probably a dangerous habit.

He establishes (?) his conclusions by the sort of analogy that appeals to his class of "discoverers."

<sup>66</sup>SOME of the love letters written by the old boys indicate that hardening of the arteries is less to be dreaded than softening of the brain."

<sup>66</sup>A JOKER put a sign on a penny-in-the-slot machine: 'If you push hard enough you will get your money back.' The next morning a Scotchman was found dead at the foot of the machine."

Doctor Emile Roux, Paris (The Scientific Monthly), tells a story of "The Medical Work of Pasteur" that will entertain, edify, and recharge the batteries of every physician.

Roux wrote his thesis nearly thirty years ago, but those who have not read it in the original will enjoy Edward F. Smith's translation, as published in The Scientific Monthly.

According to the Public Press:

—A great press association's London representative again heats the cables with the alleged mutterings of another world-medical authority. In this instance the new (?) fact (?) that "it is a good thing to tickle babies" constitutes the amazing message. The erudite savant is quoted as saying that "tickling makes babies laugh," and that laughing "makes their lungs expand," and that "expansion of the lungs forces them to breathe fresh air."

Next thing we know there will be a tickling treatment for tuberculosis, "falling of the womb," and ingrowing toe-nails.

Funny world, isn't it?

—The Doctor who advises tickling babies to make them healthy is a distinguished London specialist, but even his medicine should be used in very small doses.

*Before following prescriptions from experts at a distance, ask the family doctor. He knows your child's case better than anyone in London.*—From an editorial, San Francisco Chronicle.

—Quite a thriller, that race of a "special train" across the continent to get a Southern California rich man to Doctor Deaver at Philadelphia for a desperate operation.

Now, Doctor Deaver is a fine surgeon, but he would be the first to state—and truthfully—that there are scores of surgeons in the patient's home city of Los Angeles as competent as Deaver or anyone else to do the alleged "dangerous and unusual operation" which was performed after a "desperate race with death."

By the way, the mere matter of detail as to whether the patient died or recovered was lost in the whistle of the thrill.

—That Federal Government agency that is telling farmers how to grow corn (also being the last word in medical knowledge, as well as agriculture) is telling mothers how to grow babies. The "Chief of the Bureau" is quoted as telling university students that getting babies to eat correct food and digest it was only a matter of intelligently applied psychology. He led for a thrill by this remarkable achievement:

"An undernourished little girl who said 'no' to everything given her was brought to the nursery. If she did eat she became sick. Our staff members explained to her that 'it simply wasn't done'—little children at the nursery never got sick. Within two days this youngster was eating her meals with the rest of her playmates, without a word."

Hurrah for the Department of Agriculture! Hurrah!

—Mr. Coue, by a heavy spurt managed to reach the second page of some newspapers for one brief issue.

It seems that he had nose-bleed, which he treated by "It passes, it passes," and next day it had passed.

What a "flash" Coue was when we look back at it. Whom was the joke on, anyhow?

—The City Attorney of San Francisco has ruled that the name of the Relief Home may not be legally changed to "The End of the Trail" or "Rest for the Weary."

We should hope not!

—Observance of Boys' Week has been condemned by the Federation of Women's Clubs.

It's about time for this stupid fad and a lot more like it to disappear along with "health fairies," "little Willie" health crusaders, little Emile Coues, and similar stunts and stuntists.

—Mrs. Wallace Reid, motion-picture actress, is quoted as having "investigated every known remedy for narcotic addiction. She studied every medical aspect of the problem, and read all the literature on the subject."

What a ridiculous statement, and one calculated to lead to harm if taken seriously. Yet this "great authority" in medical matters is behind a movement to substitute one of the most dangerous of all poisons in the treatment of patients addicted to the use of one almost harmless by comparison.

Mrs. Reid belies her looks and the records of her age if she has done all the things she "admits" having done in the above quotation.

—"If it were possible to absolutely shut off the traffic in contraband drugs in the United States tomorrow we would have thousands of sick and dying on our hands,"

Mrs. Wallace Reid, "one of the foremost authorities in the United States on drug addiction" (!) is quoted as saying in what appears to be her propaganda to get San Francisco people to "support" a sure-cure hospital to practice medicine according to the "fully proved plan" of one Fred Du Bry.

The "Reid Foundation" tried this experiment for some years in Los Angeles and apparently failed to secure the support they wanted. In any event, the Los Angeles sure-cure hospital has been closed, and the "Foundation" is trying to sell their sure-cure method to San Francisco citizens.

It is safe to prophesy that they won't even get to first base.

—Physicians who are of course informed of the action of opium products upon guinea pigs will get quite a kick out of one Du Bry's newspaper accounts of how he made dope addicts out of these animals and used these dopesters to discover and perfect his sure "painless cure" for human addiction.

Quite a stunt that, and it is all the more illuminating by Du Bry's quoted admission that he was using dope himself during his experiments. He claims to have been completing his knowledge of the medical sciences during the same period—at least when he wasn't looking for a job.

Du Bry is not good enough on the "sob sister" stuff. He would stand a better chance by engaging an expert.

—"This article paid for by the Medical Research Syndicate for the Advancement of Science."

This slogan is printed in suspiciously small type, easily overlooked on a display page of eulogy of a doctor who is announced as devoting the resources of a great herd of wild he-goats to the rejuvenation of such gullibles as can be induced to fall for the amusing appeal of this "medical syndicate" (!)!

We do wonder about the claim that "more than two hundred representative physicians" have had this doctor's treatment and that an "average of from three to five doctors apply weekly for shots of the wildness of the wild goats from the wildness of a summer resort island off the coast of California.

Again we wonder (!)!

—California's Superintendent of Physical Education showed himself a philosopher of the old school when he put his "O. K." on:

"Short skirts, cosmetics, loose waists, low-necked dresses, short sleeves, rolled stockings, modern shoes, and bobbed hair."

However, we suspect that the newspaper correspondents somewhat garbled the good doctor's thoughts when they quoted him as saying that "Loose waists give the internal organs a chance to circulate."

—"Scientists Plan Artificial Mating of Man and Monkeys"—This cabled dispatch from Russia has been treated by some papers as "news."

If this is "news" the definition of that elusive term may no longer be sufficiently illustrated by the story of the man biting the dog.

—We knew some sentimentalist would restore the happiness of female monkeys of the African jungle and female goats of the wilds of Catalina by restoring their consorts to them in serviceable condition.

Two "Docs" in Berlin, "news" dispatches "inform" us, have invented "Ovovop"?! which is the genuine simon-pure quintessence of that thing necessary to keep women young.

It is no longer necessary for them to rob happy goat and monkey homes to retain their voluptuousness and youth. They may have laboratory-made stuff injected by hand.

Ain't science wonderful?

—Some people got het up over the stories about California's poor little deaf and blind wards having to eat beans.

Eliminating the obvious, the initiated will see in explosions of this character the natural consequences, yet in their infancy, of our "health education" efforts as they

are being promoted by different groups of what one editor calls "directors of vitamins and calories."

Scientific dietetics is a worthy study, but as a people we have long since lost sight of the fact that good health depends quite as much upon a knowledge of the great variety of capacities for food digestion and assimilation as it does upon the inherent possibilities of food elements.

Sooner or later the present fad will pass, and we will start all over again to study dietetics, as physicians always have been taught, in terms of end-products produced by the action of known foods in unknown boilers.

—A physician holding a dignified position, and who recently returned from a trip to the Orient, brings back the startling news that: "*It is now agreed that beri-beri prevails chiefly among peoples who eat highly polished rice.*"

We thought the moon was about right to indicate this discovery again. Maybe the doctor didn't say it, but the A. P. served it to its subscribers, and it got the doctor's name and his position correct.

—An English insurance company is doing quite a business insuring prospective parents against twins.

A stunt of this kind is provocative of dreams of what might be done—and some day will be done in broader fields by intelligently planned voluntary health insurance.

—There is but one solution for what the owlish school of thought calls the "crime problem," and the solution is so simple and effective as to render the use of the word "problem" superfluous. So long as we slobber over thieves, murderers, and swindlers instead of punishing them, the periodic "crime waves" will continue to roll on, robbing us of our savings and disturbing our peace of mind. And of one thing we may be sure, the present deplorable conditions will continue so long as sentimentality is permitted to usurp the offices that rightly belong to justice and reason.—James S. Ford (Scribner's, October).

—Among the ten or more "fights" that reached the headlines in one day recently was the news that the doctors had suddenly decided to wage a "fight" on the maternal death rate.

Such "news" may surprise doctors who have grown old in this "fight." It's a worthy one, but when the record is compared with some others, we seem to be doing quite well. The rate is 14.9 per 100,000. Killers alone got 8.4. Then, too, some people forget that childbirth doesn't kill all who die at that time. There is more than the normal rate of death for other women of similar ages that must be subtracted from these figures and only the balance charged to the "incompetency," "carelessness" and "what-not of doctors.

However, chiefs of bureaus have got to have excuses for spending tax money, and they must make "news" out of their stories in lieu of paying advertising rates. There are too many women dying of childbirth, and all decent doctors do what they can to reduce this mortality.

Propaganda of a federal tax-supported bureau calculated to arouse dissatisfaction with doctors isn't going to help.

—We don't yet know precisely what Sir Arthur Keith did say about the appendix, but whatever it was it captured both the front and editorial pages of hundreds of newspapers.

It appears that Sir Arthur believes that troubles with the human appendix are explained by man's "faulty habit" of standing on only two of his legs. Thus we have another job for the habit posture and child guidance clinics.

By the way, those doctors who have not read Doctor Keith's two volumes on "The Antiquity of Man" have missed something very much worth while.

—"Copper poisons have been found in 10 per cent of the 'bootleg' liquors," says a news item. Doctors of this generation will soon have to be as familiar with copper poisoning as were our colleagues of generations ago.

And so goes health progress.

—Turn off the radio at 10 o'clock, advises the California



Health Board as one of its several longevity rules—pretty good ones, too, as rules go.

But why turn on the radio at all for health information? No one but an educated physician—and he doesn't need the advice—can pick out from the large volume of propaganda the small amount of legitimate health advice that comes through the air.

Sentences like this—"If cases are placed under observation early, when the condition of the patient is good—" recur with astounding frequency in medical manuscripts. Why?

#### From the Editor's Mail:

—Your letter was very stimulating to me. I appreciate your kindness in accepting my article. In the preparation of various reviews I have glanced over hundreds of state and interstate journals. The only one that I religiously put with the big surgical and urological periodicals for careful reading is the one that you have edited for so long. It suggested to me that the state that I was going back to had a high content of good medical timber. I like the method of discussion after the articles; sometimes it is of more value than the article.—A. J. S., Los Angeles.

—Allow me to express on behalf of myself and the members of our society our deep appreciation of the marked improvement in CALIFORNIA AND WESTERN MEDICINE under your able editorship. Especially do we find the November number of exceeding interest.—H. D. L., Woodland.

—May I add a word of appreciation for your recent article, A. M. A. Journal, and also for the one in *Better Health* in defense of the doctor. The latter should be published in a lay magazine, and ought to be given space by Collier's. Perhaps this has already been done. Your persistent fight in behalf of the regular profession is widely appreciated, and will be of great value, especially to the young men.—W. L. H., Los Angeles.

"Life is the state of an organized being in which it maintains, or is capable of maintaining, its structural integrity by the constant interchange of elements with the surrounding media."

This definition, copied verbatim from Oliver Wendell Holmes, was recently widely published as original by—Well, never mind, but he ought to be ashamed.

#### With Other Medical Editors:

—There are as wide ranges of metabolic peculiarity in man as is shown between a razorback and a Berkshire pig. Davenport, in his recent study of Body Build and Inheritance finds that these peculiarities with their resultant products of slender or heavy types of structure, or of leanness and fatness, are decidedly matters of heredity.

In a time when too much is being made of height-weight indices as measures of nutrition, some of his conclusions are of interest as supporting opinion from common observation.—Editorial, Medical Journal and Record, November 4, 1925.

—Some medical editors are being rather critical of Doctor W. H. Kellogg's stand (American Journal of Public Health, October) regarding the use of the Schick test.

Doctor Kellogg is a member of the C. M. A. and active in public health work. CALIFORNIA AND WESTERN MEDICINE will not comment upon his utterance, but we will make "The Schick Test: Its Uses and Abuses" a subject for "Bedside Medicine for Bedside Doctors," and ask Dr. Kellogg to open the discussion.

—It is very interesting to study the reviews in any of the medical publications enjoying a large circulation. One is impressed by the gentleness with which the reviewer handles the feelings of the author and the publisher. It is very rare indeed to find a frank condemnation of a poor book or of a poor section of a good book. Such criticism as is offered is usually couched in such delicate phraseology as to rob it of its purpose. It would

be very refreshing to find a statement that a given book should never have been published, if such a statement is deserved. However, one never sees so frank a criticism, though it is certain that many books are produced annually for which there can be no possible excuse.—Editorial, Atlantic Medical Journal.

—The leading editorial (Boston Medical and Surgical Journal, November 5) takes frank issue with both statements and conclusion of W. H. Kellogg's article about Schick tests (American Journal of Public Health, October). The concluding paragraph of the editorial reads:

"The large and constantly increasing experience of physicians and health officers in Massachusetts is quite contrary to the experience reported by Doctor Kellogg. It confirms the reliability and value of the Schick test as an agent in diphtheria prevention and gives an emphatic 'No' to his, 'Should the Schick test be abandoned?'"

—The relation of sadism to sex is well understood by medical men. The real irony of the situation in the movies consists in the frantic efforts of the smut-hounds to limit the duration of a kiss, or to tone down a bedroom farce, or to keep enough clothes on the stars, while the graphic presentation of sex in its most brutish, vicious and perverted forms gets over with a terrific wallop. Nothing more is needed to prove the futility of censorship and the imbecility of the censors.—Editorial, American Medicine.

Taking care of a patient means more than treatment of a specific disease.

Treatment of the disease may be impersonal, but the care of the patient must be personal.

Hospitals are apt to deteriorate into dehumanized machines.—Francis Peabody (Boston Medical and Surgical Journal).

DOCTORS ARE IN THE HABIT OF KEEPING DATES—They should, therefore, all remember and plan for the A. M. A. and C. M. A. meetings of 1926. The A. M. A. meets in Dallas, Texas—almost next door—April 19 to 23. Let's all go. Texas came out strong to support California when the A. M. A. was with us in 1923. It is going to be a great meeting, and some of the most interesting problems ever before medicine will be threshed out and acted upon in the House of Delegates.

AT ITS recent meeting the Southern California Medical Association elected T. C. Lyster, President; A. J. Thornton, First Vice-President; C. R. Howson, Second Vice-President, and C. T. Sturgeon, Secretary-Treasurer.

The next session will be held in San Diego.

We regret being unable to secure data upon which to base the more extensive publicity this important association so richly deserves.

Doctor—I'll examine you all over for \$15.

Patient—All right, Doc; and if you find it, we'll split fifty-fifty.

#### California, Nevada, and Utah Doctors Publish Elsewhere:

[Note—Members of the California, Nevada, and Utah Medical Associations are invited to supply the editor with reprints or marked copies of magazines containing their articles or very brief abstracts. All that we receive will be noted regularly in this space.—Editor.]

—Victor G. Vecki, San Francisco (Journ. A. M. A., November 21, 1925), writes on "Fifty Years of Progress in the Treatment of Gonorrhea."

—E. B. Shaw, H. E. Thelander, and E. C. Fleischner, San Francisco, write on "Convalescent Serum in Paralytic Cases of Poliomyelitis: Results of Intramuscular Administration."—Journ. A. M. A., November 14, 1925.

—Roland P. Seitz, San Francisco, writes on "Extreme Leukocytoses in Pertussis: A Survey of the Literature and Report of Two Cases."—American Journal of Diseases of Children, November, 1925.

—Walter Scott Franklin, and Frederick C. Cordes, San

Francisco, write on "Electric Cataract."—Journal A. M. A.

—Ernest S. DuBray, San Francisco (Amer. Jour. Med. Sciences), "Comments on Body Weight in Relation to Health and Disease."

—John W. Shuman, Los Angeles, "The Aim of the Medical Student," in the New York Medical Times, December, 1925.

There's sunshine in the heart of me  
My blood sings in the breeze  
The mountains are a part of me  
I'm fellow to the trees,  
My golden youth I'm squandering,  
Sun-libertine am I;  
A-wandering, a-wandering—  
Until the day I die.

One may wonder whether Robert W. Service was taking his own treatment when he penned these lines, or whether he was inspired by the traditions of the sun worshippers. In any event, he wrote a manual of therapeutics that many people are following as our forefathers followed it, with somewhat less appreciation of underlying principles than exists today.

"So you don't believe in vaccination, Mrs. Agronomy?"  
"No, indeed, Bella. Three weeks after little Yokel was vaccinated he fell out of the window and broke his neck."  
—Brown Jug.

However well-intentioned men may become under the influence of religious and literary institutions, when the bodily organization is weak, the power of virtuous effort is proportionately enfeebled. . . . All along the life-way of a pure-minded but feeble-bodied man, on the right hand and on the left, his path is lined with memory's grave-stones, which mark the spots where benevolent enterprises perished and were buried, through lack of physical vigor to embody them in deeds.—Horace Mann.

"Whatever doubts may be entertained of moral evils, the natural, for the most part, such as bodily infirmity, sickness and pain; all that class of complaints which the learned call chronic diseases, we most undoubtedly bring upon ourselves by our own indulgences, excesses, or mistaken habits of life; or by suffering our ill-conducted passions to lead us astray or disturb our peace of mind."

Doctor William Cadogan wrote this about two hundred years ago. Cadogan was held up to ridicule and largely ostracized for the statement, as were others for similar conclusions hundreds of years before. Today similar facts are applauded as "discoveries" and the savants who make them honored among men.

Would we be classed as pessimists if we prophesied that these simple facts may be "discovered" again two hundred years from now?

In any event, as Kipling wrote:

"The Lord knows what we may find, dear lass,  
And the deuce knows what we may do,  
But we're back once more on the old trail,  
Our own trail, the out trail,  
We're down, hull down on the Long Trail,  
The trail that is always new."

Our mail continues to be a source of joy, help and inspiration. There are many indications of the sound progress of a magazine. Skillful administration (the co-ordination of editorial, advertising, circulation, and manufacture) is one which makes for profitable operation; advertising gain, which shows greater confidence in a magazine's influence; circulation, new and old, the former reflecting growing acceptance, the latter reflecting growing "reader regard"; finally, editorial influence, affecting first and last all the others, yet showing distinct manifestations all its own. . . .

The phase that interests me most is the response of readers. The bugbear of all editors is, "Is it read?" No editor likes to soliloquize. A fine, double-fisted editorial,

pointed to reform the universe—how much is it worth if nobody reads it?—Editorial, Nation's Business.

"To the young and voluptuous, who are yet in their career, and declare for a short life and a merry one," wrote William Cadogan in "A Dissertation on the Gout," some two hundred years ago, "I have nothing to say but this, that a short life is very seldom a merry one; on the contrary, is generally made up of a few years of riotous pleasure without happiness, to be severely paid for by as many more of pain, sickness, regret, and despair."

What a splendid service Doctor W. Jarvis Barlow and his associates are rendering in conducting the Barlow Sanatorium in such a manner as to make it useful to the curable tuberculous of moderate means.

The twenty-second annual report of this worthwhile medical institution has just been issued and, like the others, it reflects credit upon the sponsors and managers of this association, and its usefulness is indicated in the volume and character of its work.

California and Western Medicine Has Accepted for publication in forthcoming issues, in addition to the list published in the December issue, the following essays, which will be published in due course of time, as suitable space is available:

A. J. Scholl, Los Angeles, "Resection of Kidney for Stone."

H. J. Templeton, Oakland, "Skin Lesions as Diagnostic Aids in General Medicine."

H. D. Lawhead, Woodland, "The Relation Between Physician and Patient."

Oscar F. Johnson, Sacramento, "The Neurasthenic Patient."

E. S. Pomeroy, Salt Lake City, "Common Sense and Urinary Lithiasis."

R. Manning Clarke, Los Angeles, "Some Observations on the Influence of Bowel Irritation Over the Gastric and Duodenal Region."

#### OPERATING-ROOM BALLAD

By J. Lee Hagadorn, M. D., Los Angeles

"What's all the choking going on?"

The student nurse said,

"A T and A, A T and A," the orderly replied.

"They're pullin' out his tonsils

An' he's gaggin' fit to kill,

An' he'll find his neck in ice-packs in the mornin'."

"What makes the head nurse run so fast?"

The student nurse said,

"They blew a fuse, they blew a fuse," the orderly replied.

"They blew a fuse an' spilt the tray,

An' old Doc Smith is cussin', say

There'll be a new head floor nurse in the mornin'."

"What makes the mother stagger so?"

The student nurse said,

"A touch o' faint, a touch o' faint," the orderly replied.

"A touch o' faint; she saw the gobs

O' blood upon the cotton swabs,

But she'll be feelin' better in the mornin'."

"Where are they going with him now?"

The student nurse said,

"He's put to bed, he's put to bed," the orderly replied.

"He's put to bed to spit and hawk,

To gurgle, groan, and try to talk,

But he'll be feelin' better in the mornin'."

The following statistics (National Safety Council) of the influence of motor accidents in the United States for the first six months of 1925 upon the public health need no comment:

	Total	Resulting fatally
Total number of accidents reported.....	21,444	799
Private passenger car.....	18,468	496
Truck or commercial.....	4,245	243
Taxicab.....	1,896	67
Gitney.....	95	4
Bus.....	156	11
Motorcycle.....	579	16

There is nothing new except what hath been forgotten.—English Proverb.



## Medical Economics and Public Health

**Stanford Popular Medical Lectures**—The forty-fourth course of these lectures will be given at Lane Hall, north side of Sacramento street, near Webster, San Francisco, on alternate Friday evenings at 8 o'clock, beginning January 8, when H. K. Faber will discuss "Dietary Peculiarities of Children," to be followed:

January 22, by H. E. Alderson on "Skin Disturbances From Foods and Drugs; February 5, Hans Lissner on "Ductless Glands and Obesity"; February 19, P. K. Brown on "Gastro-intestinal Disturbances and Nutrition"; March 5, E. G. Martin on "Fatigue and Rest"; March 19, G. E. Ebricht on "On the Prevention of Disease."

Doctors and their organizations are everywhere much interested in the problem of making the simple facts about health available to those who care to have them, so why not attend these lectures and invite your clientele to attend them, and support popular medical lectures given, as they always should be given, under medical supervision?

The abuse of medical charity is increasing. Thousands of well-paid and prosperous patients crowd the clinics, and some of them go there with the idea that they are getting a superior kind of treatment, but most of them go there because they can get something for nothing and they can save money that should go to private practitioners of medicine. Once they have tasted the benefits of medical charity, so freely bestowed by the clinic operated and controlled by state, city, public health and social hygiene services, it is easy to expect that kind of service always, and from everywhere they apply. Those who accept medical charity soon lose their self-respect, and if they do not become actual dependents they add to the burdens of the enterprises that are kept up by taxation.—Editorial, Journal Indiana Medical Association.

The individual general practitioners constitute by far the largest group of doctors; perhaps 75 per cent of all. Except in emergencies the great mass of the population look to the general practitioner. When the word "doctor" is mentioned, it is he who comes to the mind of the average citizen.—President Vincent of the Rockefeller Foundation, Ohio Medical Journal.

"Doctor" John Scott Barker must serve five years in the penitentiary. Barker was convicted about a year and a half ago of violation of the Federal Narcotic law in connection with the operation of "narcotic cure" hospitals.

Twenty thousand infant deaths, 40,000 abortions, and 80,000 deaths among adults is the toll exacted by syphilis in France each year, according to the Minister of Labor, Hygiene and Social Welfare.—The Lancet (London).

Why patronize itinerant microscope fixers when reliable firms are advertisers in your magazine?

Only a reliable expert should undertake to recondition a good microscope. Those who have not yet learned their lesson might see something of interest in this note.

Physicians always have and always will render much free service. That is humanitarian. That is professional duty. They always have, and always will lead the way in public health movements, even to their sacrifice and personal detriment. That, too, is proper. But should it also be their duty, at additional financial sacrifice, to advertise public health and scientific medicine to the public? Probably they should in some manner. One wise teacher and observer has declared that physicians overlook many opportunities for "health education" in their contact with their patients. Could not such splendid opportunity be utilized to advantage?—Ohio Med. Jour.

The mass of the population (perhaps 75 to 80 per cent) are treated by general practitioners who have limited technical appliances, little or no specialization of skill and slight relation to medical services organized in hospitals, dispensaries, and clinics. The rich and well-to-do (perhaps 5 per cent) receive attention from spe-

cialists who depend primarily upon their own individual equipment, who have little connection with institutional medicine, but provide a high degree of specialized skill. The poor (perhaps 15 to 20 per cent) are under the charge of organized practice, that is, doctors who have access to institutional equipment, offer a high degree of specialization, and are fairly well connected with hospital, dispensary and health center services.—President Vincent of the Rockefeller Foundation, Ohio Med. Jour.

**Bootlegging in the sphere of reproduction** is practiced by people on a larger scale than it would be were there no such laws on the statute books. What would have been moderately practiced is now immoderately resorted to, with the result that the birth rate is tumbling among many groups. And it seems to be true that the same class of people who formerly used little or no alcohol as a beverage, but who now are pretty good drinkers, are the same people who are practicing birth control most intensively. We have in mind the better type of citizens who, for psychological and traditional reasons, are unamenable to oppressive laws and are inevitably bound to circumvent them and ultimately to defeat them.—Editorial, New York Medical Times.

Are we approaching the time when what we wish to do we must first prohibit—preferably by an amendment to the Constitution?

**Some Influences of Air Pressure Upon Health**—Newspapers recently made a first-page story about certain fish that exploded when brought rapidly to the surface from their normal habitat in the depths of the ocean.

Physicians in the tropics recognize altitude disease or hill diarrhea as being produced by sudden changes in air density. Altitude or rarefied air disease also is an authenticated trouble among aeroplane operators, and similar disturbances have been recognized as mountain sickness for untold centuries. Compressed-air troubles or caisson disease, as it was once known, is also of increasing prevalence, due to changing industrial conditions. It was found that workers in the steel caissons used in pushing the tunnels under the river at New York had to be removed from the high pressure under which they worked in the caissons to normal air by slow, easy stages, in chambers of gradually reducing air pressure, otherwise their joints puffed up like air balloons, the pain was terrific, and other troubles ensued.

The influence of air density upon health is a subject of growing importance. Worthwhile literature is being published and a rather extensive literature is already available to those who care to look in out-of-the-way places for it. However—and this is the point of this note—conservative physicians will be cautious in applying plausible theories and in utilizing theoretical possibilities about the influences of air pressure in the treatment of human beings. Above all, investigate before investing money in schemes calculated to make money and serve the public by utilizing air density in unproved fields.

**Hollywood Hospital**—In this and subsequent issues of CALIFORNIA AND WESTERN MEDICINE a dignified announcement of the Hollywood Hospital will be found in the advertising pages. This splendid type of hospital is one of a growing number that have been promoted and developed by forward-looking citizens in various centers throughout this state. Prominent physicians of the Hollywood section of Southern California and prominent non-medical citizens have pooled their interests and are expressing modern health service through this fine institution, which is fully accredited by our state and national accrediting bodies.

Those who constantly consult the physicians' directory will find several new names added this month. H. J. Templeton has recently opened offices in Oakland, and is limiting his practice to dermatology and syphilology. Thomas E. Gibson has opened offices in the Flood building, San Francisco, and will limit his practice to urology; while Thomas J. Clark and F. H. Stibbens, Oakland, limit their practice to dermatology, syphilology, and genito-urinary diseases.

Ford Hospital has created a mild sensation in medical circles by throwing away its price list for human

repairs and parts. The Ford staff has been officially informed that the flat-rate system of charging for the treatment of human ailments has been abandoned and that "the patient's charges will be on an income basis," which is the customary method of the medical profession as a whole in making charges.—Ohio State Medical Journal.

Why Mr. Ford has abolished the fee system on which he has operated for ten years is not publicly stated; but the fact is that, besides the millions he has put into his hospital, he has had to make up a deficit of \$2,400,000 in that period. It is a reasonable assumption that, by charging his patients according to their income, he expects to get more business from people who could not afford to pay his fixed fees and to reduce his annual deficit. Mr. Ford's experience seems like a fair vindication of the ancient fee system of the medical profession.—Detroit Saturday Night.

The State Controller concludes that \$10,000,000 of tax money was spent in official charity last year.

Quite a tidy sum, but less than was spent through "voluntary" organizations. Both together is less than was contributed by individuals privately.

Charity as a government function and as Big Business is growing by leaps and bounds, but at the same time it is losing its savor, without which its future may be predicted with certainty.

**Comfortable Chairs for Convalescents**—Sonnenschein Brothers' advertisement of a chair to meet this very important need in serving the sick is carried in this and subsequent issues of CALIFORNIA AND WESTERN MEDICINE. This chair may not satisfy everyone, but it is receiving commendatory endorsement from several of our California hospitals. We commend its consideration to doctors who consider the comfort of their patients as contributing to successful treatment.

According to official figures, California counties spent over one and a quarter million of dollars for sheriffs' expenses; over half a million more for constables and over five millions for courts.

*They spent less than one-third of a million for health.*  
Who wouldn't rather be a peace officer with a pull than a health doctor for ten dollars a month?

According to "official figures" recently featured in the public press:

*Influenza* killed 604 Californians last year. Motor cars beat the influenza bacillus all hollow by killing 1254.

*Scarlet fever* only completely destroyed 106 (all children), but murderers got 374.

*Cancer* caught up with 5120 of our people. Automobiles, railroads, machinery, assassins' bullets got 2211.

Altogether, the death rate of 1452 per hundred thousand was eighteen points higher than it was the year before.

The most interesting feature of these statistics is that the death rate from causes that everyone can see and understand increased more sharply than in those diseases of more obscure causes.

If it is more "health education" our people need, what about applying it to possible victims of motor cars? It is easier to avoid motor cars even on Market street, San Francisco, or Broadway, Los Angeles, than it is to avoid influenza germs or cancer.

**Niles Home for the Aged**—Many doctors undoubtedly will be glad to see the dignified statement of the Niles Home for the Aged, which will appear hereafter in the advertising pages of this magazine. It is a sign of better times and an advance toward things as they ought to be when institutions designed to conserve health and to care for the aged realize the value of holding an accredited standing before medical organizations.

**Spring water** will be delivered to your office or home by the Purity Spring Water Company, whose announcement begins this month in our advertising pages, and will continue throughout the year. We are glad to add their name to our list of advertisers handling good water and marketing it in an ethical manner.

In his propaganda for the laudable purpose of arousing the citizens of Orange County to the importance of having all children immunized against smallpox and diphtheria, the county public health doctor says: "*There is absolutely no harm in these vaccines. They are thoroughly sterilized before using, and there are no live germs in them.*" (Italics ours.)

This statement has called forth protests from non-medical citizens and from physicians. The former ask the Better Health Service if they are compelled to patronize these tax-supported free clinics instead of their family doctors. Some of them ask why the family doctor is incompetent to render this service if it is as "simple and harmless as the clinic doctor claims." Physicians protest against the inaccuracy of the quoted statement, claiming that the unreliable assertion that smallpox vaccine "is thoroughly sterilized before using" is potentially harmful when uttered by doctors who know better.

**THE WOMEN PHYSICIANS' CLUB OF SAN FRANCISCO** was organized at a dinner held at the Bellevue Hotel, December 11, 1925.

All women physicians of San Francisco who hold an M. D. degree and who are licensed to practice medicine by the State Board of Medical Examiners of California were invited to take part.

There are 152 women in San Francisco who are eligible for membership; of this number 90 responded, 12 are out of the state, 3 were not located, leaving 47 unheard from.

The meeting was attended by 69 women physicians. Following the dinner, the necessary steps were taken for forming a permanent organization.

Dr. Adelaide Brown presided, and called upon Dr. Anna MacRae, who, with Dr. Agnes Walker, took charge of the arrangements, to call the roll of those present, asking each member as her name was called to rise, repeat her name and give her college; to this was added, in the spirit of fun, her year. This brought about much applause, particularly as all parts of the United States were represented, as well as Russia, Siberia, and Paris.

The years, beginning with Dr. Lucy Wauzer (1876), and Dr. Emma Merritt (1881), both of which were enthusiastically received, down to our infants of 1925, which caused almost as much enthusiasm.

Dr. Louise Deal gave a short account of the formation of the club.

Dr. Eva C. Reid presented a "Constitution and By-Laws." This was read aloud twice and, while it was being discussed, Dr. Brown appointed a nominating committee, consisting of Doctors Walker, Flynn and Atkinson.

Upon return of this committee the following report was given: President, Louise B. Deal; Secretary-Treasurer, Edna Barney; Executive Committee—Eva C. Reid, Eileen Leonard, Mary Glover.

A vote was taken upon this ticket and carried. Dr. Brown, in a very gracious speech, installed Louise B. Deal as President.

The Constitution and By-Laws were then voted upon and accepted.

Dr. Bertola was called upon for a speech, the subject of which was the affiliation of the Women Physicians' Club of San Francisco with the State Federation of Women's Clubs. This was later discussed and unanimously carried. The President appointed Dr. Frieda Kruse, Chairman of a Committee on Music.

Those present were: Doctors Jennie Anderson, Arthurs, Ash, Atkinson, Barney, Bertola, Boerke, Boldemann, Botsford (detained), Bridgeman, Brown, Bruckman, Buckley, Byrne, Campbell, Crabtree, Culver, Davis, Damkroeger, Deal, Donovan, Duggan, Eaton, Feeley, Flynn, Gifford, Glover, Alice Goss, Gulbrandsen, Genung, Mary Harris, Holsclaw, Noble Haven, Jolius, Keys, Kruse, Lafontaine, Leonard, Loveless, McKellips, MacRae, Mahoney, Kuleav Maximova, Elizabeth Maximova, Merritt, Mentzer, Morris, Macomber, Maxwell, Piper, Pettis, Perillat, Reid, Rethwilm, Richter, Schulze, Selling, Shimkin, Siebe, Spriggs, Stadtmuller, Stark, Stevens, Strickler, Taber, Take, Torrey, Agnes Walker, Wanzer, Winslow, Wright, Willits, Wood, Goldman, Watkins (detained).

Unable to attend, but expressing a desire to join: Doctors Owen, Pope, Cornell, Trimmer, Scott, Beebe, Hewitt, Simon, Reghetti, Malpas, de la Hautiere, Lynn, Sanborn.



## California Medical Association

EDWARD N. EWER, M. D., Oakland.....President  
 W. T. McARTHUR, M. D.....President-Elect  
 EMMA W. POPE, M. D., San Francisco.....  
 .....Secretary and Associate Editor for California

AS CALIFORNIA AND WESTERN MEDICINE goes to press, we learn the sad news of the sudden death of Doctor T. C. Edwards of Salinas. In the passing of Doctor Edwards the California Medical Association has lost one of her most dearly loved and honored members; one who combined the highest type of professional service and integrity with the broadest understanding and sympathy with humanity. Doctor Edwards has left a rich heritage of exemplary service that will be a constant inspiration to all who knew him.

A full account of the life of our former loved President will appear in the February issue.

### ALAMEDA COUNTY

Alameda County Medical Association (reported by Pauline S. Nusbaumer, secretary)—The regular monthly meeting of the association was called to order by the president, H. B. Mehrmann November 16, at 8:15 p. m. L. P. Adams and F. B. Taylor reported a case of benign obstruction of the esophagus over a period of forty years. The following program was then presented by the staff of the United States Veterans' Bureau, Hospital No. 102 (by invitation):

A. O. Sanders in his paper, "Metallic Tinkle," said in part: Some textbooks on physical diagnosis still give the metallic tinkle as diagnostic of Laennec's triple lesion: (1) Pneumothorax or pulmonary cavity with (2) open bronchus and (3) fluid or effusion. Of a series of forty-four cases of pneumothorax, most of whom he observed from two to eighteen months, making frequent physical examinations of chest and checking by x-ray, ten cases were of spontaneous and thirty-four were of induced pneumothorax. Of the ten spontaneous pneumothorax cases, metallic tinkles were heard in six, one of which had no demonstrable fluid. Of the thirty-four cases of induced pneumothorax, metallic tinkles were heard in twenty-four, though in sixteen of these twenty-four cases no fluid could be demonstrated either by physical examination or by x-ray. In one case of complete collapse of the left lung with no demonstrable fluid, clear, bell-like tinkles were heard exactly synchronous with the heart beat. In several cases of induced partial pneumothorax, further collapse being prevented by firm pleural adhesions, typical moist rales were heard over the adherent diseased lung; and as the stethoscope bell was moved off the margin of the adherent lung, the rales could still be heard, more faintly, but with an added metallic quality. As the stethoscope bell was advanced gradually away from the adherent lung and over the pneumothorax cavity, these sounds became unmistakable metallic tinkles. In his conclusions the doctor stated that it would appear, from observations of the forty-four cases here reported, that metallic tinkles in pneumothorax are not confined to cases with open bronchus and effusion. Metallic tinkles were heard in cases of induced pneumothorax, with neither fluid nor open bronchus. It would also appear that metallic tinkles may be produced in pneumothorax by sounds arising from distinctly varied sources, the most frequent being rales from adjacent diseased lung tissue.

S. E. Stroube in his paper, "Some of the Gastro-intestinal Complications Occurring in Pulmonary Tuberculosis," discussed tuberculous conditions occurring about the mouth, including the oral mucosa, tongue, salivary glands, esophagus and pharynx under one head, giving a brief description of the gross pathology, frequency of occurrence, palliative and surgical treatment, and indications

for each. The doctor stated that gastric tuberculosis is seen very rarely, occurring in three forms, chiefly: (1) Miliary tuberculosis of stomach; (2) tuberculous ulcer of stomach; (3) tuberculous granulation tumors. Each form was discussed, symptoms and differential diagnosis, with special reference to malignancy, syphilis, and peptic ulcer. Emphasis was placed on the fact that x-ray is the one most reliable diagnostic factor. Under treatment, dietetic and hygienic measures and surgical relief were discussed and indications for each outlined, four cases coming under the writer's care being included in the discussion. Tuberculosis of the liver and gall-bladder was mentioned as being frequent, but rarely, if ever, diagnosed except at autopsy. Intestinal tuberculosis was considered the most frequent of all complications occurring in pulmonary tuberculosis, being present in approximately 90 per cent of cases coming to autopsy. That it was practically always secondary, being rarely, if ever, primary and most frequently found in cecum, ileum, and, to a less extent, in the jejunum and colon, a frequent finding being the hyperplastic form in region of the ileo-cecal valve, causing symptoms of obstruction. Diagnosis is difficult, as all the usual symptoms are often present and, at autopsy no tuberculous enteritis found, due to the fact that the same group of symptoms occur so frequently from toxemia, intestinal catarrh, and improper diet. Here, again, the x-ray will be found the most reliable finding on which to base diagnosis. Diet, medication, surgery, and heliotherapy were discussed as to relative value and indications for each in treatment, heliotherapy being considered the treatment of choice in the majority of cases, with the others as adjuncts, as indicated. The writer claims that tuberculous peritonitis occurs much more often than supposed, not diagnosed. Three chief forms (1) miliary, 70 per cent of cases; (2) chronic adhesive, 25 per cent of cases; (3) chronic ulcerative, 5 per cent—condition seen frequently in acute miliary tuberculosis, but rarely associated with chronic pulmonary tuberculosis. Mode of infection may be blood, lymphatics of pleura or pericardium, mesenteric lymph glands, tuberculous lesions, urogenital system. Treatment consists chiefly of heliotherapy with laparotomy in selected cases, together with hygienic measures. The conditions occurring about the rectum, associated with pulmonary tuberculosis, including ischio-rectal abscess, fistula in ano and fissure of the anus were covered rather thoroughly, especially in reference to treatment. All of these conditions are found very frequently associated with pulmonary tuberculosis, which consequently has considerable bearing on the choice of treatment and the prognosis. As a rule, fissure responds to the ordinary treatment for this condition, but even here you occasionally find a case will not heal. The other two conditions, as a rule, will not heal as long as there is active pulmonary involvement.

Basis of the paper, "The Relative Value of Roentgen Ray and Physical Findings in the Diagnosis and Treatment of Pulmonary Tuberculosis," by L. H. Fales, was the comparison of the roentgen ray and physical findings of patients admitted to U. S. Veterans' Hospital, No. 50. Total number of cases compared, 411. Found to be tuberculous, 245, or 60 per cent. Found to be non-tuberculous, 122, or 30 per cent. Classified as observation cases, 44, or 10 per cent. Of the 245 definitely tuberculous cases, 222, or 90 per cent, grossly agreed as to roentgen ray and physical findings, so far as coming to the same conclusions as to classifying the case. Physical findings and roentgen ray were quite definitely the same in 124, or 50 per cent. The roentgen ray evidence was more extensive in 88 cases, or 36 per cent. Physical signs predominated in 12, or 5 per cent. In 17 cases, or 6 per cent, there was roentgen ray evidence, but no definite physical signs. In 4 cases, or 1½ per cent, there were physical signs, but no roentgen ray findings. In 11 per cent the roentgen ray showed involvement of the second apex, which was not shown by physical findings. Cavitation was demonstrated by the roentgen ray in 90 cases, or 36 per cent. In only 28 of these 90 cases, could cavitation be found by physical signs alone. Rales were found in 1.6 per cent of cases having peribronchial infiltration alone, while they were present in 93 per cent of cases showing a parenchymal infiltration. Of the definitely tuberculous cases, 66 per cent had positive sputum. Of

the cases having both a roentgen ray lesion and medium rales, 69 per cent had a positive sputum. Of the cases with parenchymal roentgen ray lesion, but no physical signs, 53 per cent showed positive sputum, while of those showing physical signs, but no roentgen ray findings, all had negative sputum. Deductions from the comparison: 1. The roentgen ray is many times more efficient than physical findings in detecting cavitation. 2. A parenchymal roentgen ray lesion without physical signs is of great significance, for 53 per cent of such cases showed positive sputum. 3. Physical signs without a parenchymal roentgen ray lesion are of very doubtful significance, for all had a negative sputum. 4. Peribronchial infiltration is of no importance in diagnosing pulmonary tuberculosis, as it was not found in any case in combination with positive sputum. 5. Parenchymal infiltration, on the other hand, is of great importance, for 68 per cent of such cases had positive sputum. 6. In a certain percentage of cases the roentgen ray will show a lesion not demonstrated by physical signs, as proved by the above comparisons, there being 11 per cent of cases with involvement of the second apex not shown by physical signs. 7. The roentgen ray more often presents a greater involvement (36 per cent) than is shown by physical signs (5 per cent). 8. A parenchymal roentgen ray lesion and rales usually occur together, this combination taking place in 93 per cent of the above series, while peribronchial infiltration and rales are almost never found in combination, occurring in only 1.6 per cent of cases. The great importance of the roentgen ray in depicting lung pathology, as compared with physical findings, was dwelt upon at some length in the paper. In this connection the great significance of Colonel Bruns' paper on "Parenchymal Rales," in a recent number of the Journal of the American Medical Association, was emphasized, the main point being that rales, as usually heard in pulmonary tuberculosis, are not, as formerly supposed, due to moisture in the bronchioles and small bronchi, but are atelectatic rales, the partial collapse of the parenchymal alveoli being caused by pressure from the adjoining tuberculous infiltration, the rales often remaining the same whether it be an active, a fibrous, or a healed lesion.

Conclusions. 1. The roentgen ray is of at least equal importance with physical findings in diagnosing pulmonary tuberculosis. 2. The roentgen ray is the most important means of determining the existing pathological condition of the lungs. 3. Serial roentgenograms, taken from two to six months' intervals, portray before our eyes the ever-changing pathology of the lungs of the tuberculous, thus giving us an insight as to the progress and prognosis, which can be obtained in no other way. 4. The time is at hand when the clinician must be trained (as Dunham expresses it) in the "roentgenoscopic pathology of the lungs." It is just as important that he make his own roentgen ray interpretations as it is that he make his own physical examinations. 5. If we are to make the roentgen ray of real value, we must discard the idea that peribronchial thickening, when it reaches the periphery, and infiltration of the hilum have any significance in the diagnosis of pulmonary tuberculosis. Clinicians and roentgenologists who still believe in this theory are causing much confusion and misunderstanding and have brought great disrepute on the true value of the roentgen ray. 6. It is urgently important that all staffs of tuberculosis hospitals adopt a uniform, pathological anatomical classification that can be used conjointly by the clinician, roentgenologist, and pathologist. 7. On account of the great value of the roentgen ray, it is of doubtful expediency for tuberculosis sanatoriums to limit the use of roentgen ray films. Their more extensive use should be encouraged, for the greater efficiency attained would save the extra expense many times over. 8. If we are to progress in the knowledge of tuberculosis, it is imperative that every effort be put forth to obtain permission to perform more necropsies. To increase our proficiency we must not only compare the actual pathology with the roentgenoscopic pathology and physical findings, but we must know, by actual study, the ever-changing pathological picture which is so essential to a thorough knowledge of tuberculosis. These papers were discussed by H. Van Horne, E. A. Montague, E. A. Beaudet, and Chesley Bush.

After the conclusion of the program and the transaction of business, C. L. McVey offered the following tribute to the late J. W. Legault: The doctor's sphere lies not alone in medical service. His life is patterned to fit the mould of all encompassing fraternity. "Non Solum Nobis." In this spirit and at this hour we solemnize the departure from our group of one who served most faithfully his patients and his friends.

Doctor Joseph William Legault was born at St. Marthe, Canada, January 28, 1867. He received his preliminary education in Canada, and was graduated from Victoria College in the year 1890. He came for the first year of his practice to Washington. Thence to Oakland, where he continued in active practice for a period of thirty-four years.

It was my privilege to know Dr. Legault, both as a co-worker and as a friend. His ideals were of the highest, and his attention to the details of practice unstinted.

"Man is his own star, and the soul that can  
Render an honest and a perfect man  
Commands all light, all influence, all fate;  
Nothing to him falls early, or too late.  
Our acts our angels are, or good or ill  
Our fatal shadows that walk by us still."

He was modest and retiring by nature, yet forceful and ready to meet the day's obligation. Hidden in the background, he carried a ready wit. He made a friend and kept him, and sought not after the plaudits of the multitude.

"And, when the stream  
Which overflowed the soul was passed away,  
A consciousness remained that it had left  
Deposited upon the silent shore  
Of memory, images and precious thoughts  
That shall not die, and cannot be destroyed."

The meeting then adjourned, out of respect to the memory of Dr. Legault.

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## KERN COUNTY

Kern County Medical Society (reported by Keith S. McKee, secretary)—At the November 19 meeting of the Kern County Medical Society the following officers were elected for the year 1926: Keith S. McKee, President; E. A. Schaper, Vice-President; L. C. McLain, Secretary-Treasurer; William H. Moore, Censor; F. A. Hamlin, Delegate; and F. J. Gundry, Alternate.

A very successful and pleasant meeting was enjoyed by sixteen members of our society, who saw Doctor LeRoy Brooks of San Francisco demonstrate a new technique on blood transfusion, followed by a lecture on the same subject.

It might be of interest to add that our October meeting was the first one held in the new Kern General Hospital—a county institution built at an expense of three quarters of a million dollars. The meeting was very well attended, and Doctor Joe Smith, superintendent, took the members on a tour of inspection from one end of the building to the other, giving us a fine feed at the finish. Kern County has a hospital of which it can well be proud, as it is thoroughly modern to the nth degree.

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## MARIN COUNTY

Marin County Medical Society (reported by J. H. Kuser, secretary)—A meeting was held at W. F. Jones' office on November 19, 1925. The meeting was opened by H. O. Hund, president, and the following members answered the roll call: H. O. Hund, C. W. Clark, F. M. Cannon, L. L. Stanley, W. F. Jones, A. H. Mays, G. M. Landrock, C. A. DeLancey, Charles B. Marston, C. W. Larson, and J. H. Kuser.

In order to comply with the request of the State Society to furnish the names of officers and delegates by the first of December, other business was suspended and the nomination and election of officers proceeded, which resulted in the following officers for 1926: President, George M. Landrock; Vice-President, Charles B. Marston; Secretary-Treasurer, J. H. Kuser; Delegate, H. O. Hund; and Alternate, C. A. DeLancey.

Motion was made and seconded to hold the annual banquet at the Hotel Rafael on January 28 at 6:30 p. m. Carried, and further arrangements left to the secretary, each member to be allowed to bring a guest.



## ORANGE COUNTY

Orange County Medical Association (reported by D. R. Ball, secretary)—The society has held a number of meetings of unusual interest since the summer recess. The programs have been supplied largely by visiting men, and the talks have been most practical, many of them being in the form of illustrated demonstrations.

At the September meeting A. E. Belt of Los Angeles talked on "Urinary Calculi." He showed a series of roentgenograms of stones in various parts of the tract, and gave brief outlines of the cases represented. In October a very excellent program was provided by members of the Riverside County Society. B. O. Adams gave a talk on "Some Observations of Foreign Clinics," the material for which was obtained in a recent trip abroad made as a member of the tour conducted by the Post-Graduate Assembly of America. W. W. Roblee spoke in an interesting manner on "What Do We Know About Arterial Hypertension. The November meeting was devoted to obstetrics, Bessica Raiche of Anaheim speaking on "The Value of X-ray in Pregnancy," and Sterling N. Pierce of Los Angeles speaking on "Low Cervical Cesarean Section." The first talk was illustrated by x-ray films, and the second by a beautiful series of slides. In December A. E. Gallant of Los Angeles, who is conducting the orthopedic work at the Orange County General Hospital, presented "Some Interesting Cases of Spinal Ankylosis."

The meetings of the Santa Ana Clinical Society have been no less interesting. In September Irving Sutton of Hollywood gave a lantern slide demonstration of interesting cases of syphilis in its various stages. In October we were entertained most delightfully in the home of our president, Dr. Bessie Stokes Martell. On this occasion the talk was provided by Phillip Edson of Pasadena on the new phenoltetrachlor-phthalein method of visualizing the gall-bladder. In November a popular meeting on diphtheria was conducted, at which W. H. Kellogg of the State Board of Health spoke to a large audience.

Officers for the new year were elected at the December meeting of the County Association, as follows: President, Bessie Stokes Martell, Santa Ana; Vice-President, D. C. Cowles, Fullerton; Secretary-Treasurer, D. R. Ball, Santa Ana; Librarian, C. D. Ball, Santa Ana; Delegate, R. A. Cushman, Santa Ana; Alternate, Harry E. Zaiser, Orange; Censor (1926-28), F. E. Coulter, Santa Ana.

New members include B. B. Mason of Laguna Beach, C. O. Petty of Fullerton, and V. G. Presson of Santa Ana.

A campaign for toxin-antitoxin immunization against diphtheria is being carried on in the schools of the county by Dr. V. G. Presson, County Health Officer. About one thousand children will have been immunized by the Christmas holidays, and it is expected that a like number will be handled after that time.

## Memorial to William Freeman

Died in Fullerton, California, June 29, 1925, age 84. Born in Medino County, Ohio, June 6, 1841. Education, common schools, Auburn Academy of DeKalb County, Indiana; Cincinnati School of Medicine, M. D., 1867. California certificate, 1895.

He enlisted September 5, 1861, Company H, Indiana Volunteer Infantry. He was twice wounded: first, in battle at Stone River, a gunshot wound through the hand, and again at Chickamauga, when the bullet passed through his body. He was discharged because of this wound, and resumed his studies that had been interrupted by the war.

After graduation Doctor Freeman practiced in Vevay and Madison, Indiana, until 1894, when ill-health (asthma) compelled him to locate in San Diego. About two years later he removed to Fullerton. Joined the Orange County Medical Association in 1899. President of the society in 1903. Later he affiliated with the State Medical Society and became a Fellow of the A. M. A.

Dr. Freeman was a staunch Republican and took a keen interest in politics. He was an acknowledged leader in the party.

## PLACER COUNTY

Placer County Medical Society (reported by Robert A. Peers, secretary)—This society held its annual meeting at the Placer County Hospital in Auburn Saturday evening, December 12, at 8 o'clock.

There were present the following members and visitors: Members—Doctors H. N. Niner, C. J. Durand, H. M. Kannar, W. L. Whittington, G. H. Fay, R. A. Peers, R. H. Eveleth, J. G. Mackay, C. E. Lewis, J. A. Russell. Visitors—Doctors M. E. Thoren and R. J. Nicholls.

This being the annual business meeting, no literary papers were presented.

The following physicians were elected to membership in the society: Mildred E. Thoren, Daniel H. Pettingell, Weimar; Carlyle M. Pearce, Colfax.

The following officers and delegates were elected to serve for the society for 1926: President, J. A. Russell, Auburn; Vice-President, R. H. Eveleth, Roseville; Secretary-Treasurer, Robert A. Peers, Colfax; Associate Secretary, Charles J. Durand, Colfax; Delegate to State Medical Society, H. N. Miner; Alternate, R. H. Eveleth.

Dr. Robert F. Rooney of Auburn was appointed as a representative of Placer County on the Committee on the History of Medicine of the California Medical Association.

The following physicians were elected, subject to approval of the Council, as affiliate members: Robert F. Rooney, Auburn; J. S. Wheeler, Lincoln.

The matter of Optional Medical Defense and various communications from the State Association were discussed.

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## SACRAMENTO COUNTY

Sacramento County Medical Society (reported by Bert S. Thomas, secretary)—The last scientific meeting of the year of the local society was held at the Sacramento Hotel on November 17. There was an attendance of thirty-seven to hear two live topics discussed by G. Parker Dillon and Edward W. Beach.

The minutes of the October meeting were read and approved after Harris added a word of praise to one of the officers.

Case Reports—Gundrum reported the peculiar incidence of the fifth attack of herpes zoster, with the identical distribution in each attack, in a middle-aged woman. The offending nerve-root in each instance was the fifth right dorsal.

Papers of the Evening—"Cancer of the Rectum," by G. Parker Dillon. Eighty per cent of all cancers of the rectum may be diagnosed by either sight or feel, 5 per cent of them being within reach of the examining finger, plus 30 per cent of them being within clear sight in a proctoscope. No particular cause may be assigned for the etiology of the growth, any more than cancer in other locations. However, the question of trauma, hardened fecal material, ulceration and cicatricial tissue formation may be accentuated.

The most important early symptoms in order of their importance are, constipation, bleeding, and pain. Diarrhea, tenesmus, tumor, alternation of diarrhea and constipation, incontinence, and emaciation may appear as individual complaints, or collectively. The mode of spread is by contiguity, through the lymph channels and through the blood. The spread through the lymph channels closely follows the three lines of blood supply—the superior hemorrhoidal, the inferior mesenteric, and middle hemorrhoidal.

The most lamentable feature connected with cancer of the rectum is shown by statistics prepared by Fiske Jones of Massachusetts General Hospital. Seventy-five per cent of the cases of cancer of the rectum treated there have been previously treated for either hemorrhoids, persistent diarrhea, or constipation.

Examination should first be digital, then bi-manual examination in the Trendelenburg position, glandular palpation, external palpation, examination of the feces for blood and mucus, and, last, a check-up by means of a barium enema and a radiogram.

There are several things in the differential diagnoses to be kept constantly in mind: pedunculated polyps, mov-

able benign tumors, inflammation in adjacent structures, tuberculosis of the hypertrophied form and specific lesions.

There is a question of the value of biopsy. Dillon believes that if cauterization is immediately done no danger will follow.

Statistics seem to indicate, despite the fact, of course, that reports are more numerous and more exacting that cancer of the rectum seems to be on the increase.

In the discussion Rulison briefly reviewed the increasing opportunity of surgical possibilities in the condition; whereas only 25 per cent of cancers of the rectum were operable with the old Kraske method, now 60 per cent may be placed in the operable class by attacking them through the abdomen—perineal route. Even now, the appallingly few 2-3-5-year cures may be measurably increased by adopting the slogan, "Get them early." At present, we may, in round numbers, report 22 per cent of three-year cures, in contrast to but 4 per cent with the old method. Harris pointed out the excellent work being done by the institution of cancer stations in France, where people may be thoroughly examined who fear the possibility of cancer. Pamphlet education, to instruct the population when to report to these stations, is being conducted by the French League for the Control of Cancer. This instruction is being accentuated to the profession also through the medium of regular articles on the subject in the "Presse Medicale." Harris stresses the value of the electrically lighted pneumatic protoscope; also, to completely section any cases of multiple polyposis.

Gundrum stated that if we *think* "cancer of the rectum," we'll pick up more cases. In closing, Dillon repeated, "Use your examining finger."

"Some Points in the Treatment of the Neisserian Infection in the Male," by Edward W. Beach. Prophylaxis: retraction and scrubbing with green soap will take care of chancroids and Cabot's disease. (The latter is rather common in the West, though rare in the East.) Injection of 1-5000 acriflavine, sealing it in the urethra by means of collodion suffices for gonorrhea, while 50 per cent mercurial ointment rub is applied for lues.

About 40 per cent of gonorrhea seen in the first few days may be aborted by the daily injection of 1-5000 neutralized acriflavine prepared in salt. Even in those cases not aborted, this treatment is sure to cut down the amount of discharge, and so, in addition, helps psychically in the start of treatment. Stronger solutions produce bands. Any treatment which increases the irritation is bad. Beach often daily alternates 1-5000 permanganate with acriflavine. Outside the office, one-half per cent protargol is utilized. He sees no particular value in the use of such drugs as sandalwood oil and methylene blue, but, since the irritation is due to two factors, an irritated urethra plus a high concentration of the urine, he simply employs the use of large quantities of water in addition to local treatment. As to restriction of food, only those foods which burn the mouth are ruled out. If, at the end of a few weeks, posterior urethral symptoms include tenesmus and the showing of some blood, Beach withdraws all local treatment and employs hot Sitz baths, rectal irrigations and sedatives, such as opium and belladonna suppositories. Later, 1-3000 mercurochrome through and through irrigations are of value. No cure is obtained until the urethra is shown to be absolutely pus-free.

The type of shreds may aid in the location of the irritation. Long floating ones are urethral shreds; comma-shaped ones that float are from the glands of Littre; ball-shaped, sinking shreds come from the prostate. A common point of neglect in the treatment of chronic complications, such as the "morning drop," is the usual lack of finding out the exact point from which this "drop" arises. This localization of the origin of the trouble is as important in this particular disease as in any other disease entity. In this particular instance the "morning drop" usually arises from a localized anterior urethritis. Dilatation plus silver salts is the treatment. Another common mistake is the massaging of the acute prostate. Neither here nor in acute vesiculitis should massage ever be used.

In the discussion Wilder spoke of the great number

of cases of residual posterior urethritis. Hale stated that the army experience showed the importance of immediate prophylactic treatment. In a large number of cases all prophylactic treatment administered two hours after intercourse were successful; eight hours after, 10 per cent were infected; after that time there is a question whether the treatment is of any value at all. Dillon spoke of the army routine of years ago—simply putting the patient to bed and placing him on a milk diet.

Application for Membership—The applications of Clarendon A. Foster and Frank Warne Lee were read for the first time. After the second reading of the applications of Joseph L. Mullin, Angus McKinnon, and Norris R. Jones, a vote was taken. All were unanimously elected to membership.

The board of directors reported that, in the future, all notices will be sent in the official envelopes of the society. They also approved the automatic appointment of the president of the medical society to officiate as a member of the Disaster Relief Committee of the Sacramento Chapter of the Red Cross.

Communications—The communication from the secretary of the California Medical Association, in reference to the new forms for application in the constituent societies, and the new rules for transfer from one society to another, was read.

Under Old Business—Parkinson called attention to the fact that the Red Cross was again asking \$20,000 for work that is, without question, merely a reduplication of effort. However, he agrees thoroughly with the president's opinion that the men and women who are doing the work thoroughly believe that they are engaged in a real endeavor; further, that they will be able to raise the money.

Parkinson, Drysdale, Scatena, Yates, Rulison, and Dillon spoke on optional medical defense. Attention was called to the fact that there are but 500 members of this optional defense fund at the present time. They need 1500 to properly function. If this number is not reached, it probably means that our present unequalled legal talent will be lost, with the likelihood of their affiliation with other insurance companies. This not only means a vital loss to the local profession, but presages a raise in the insurance rates. The probable reason for the lack of local support was offered as follows: First, there has been a fortunate immunity from suits here; this cannot last. Second, the men in this vicinity are likely covered for a greater amount than the average man throughout the state. It was advised that applications for this optional medical defense be enclosed with the December meeting notices.



## SAN BERNARDINO COUNTY

San Bernardino County Medical Society (reported by E. J. Eyttinge, secretary)—A meeting was held on December 3 at the County Hospital.

Letter from Dr. Ross Moore, relative to malaria, read. The question of the official A. M. A. auto emblems was taken up, and it was decided to issue a questionnaire in regard to this matter to be reported on as part of the next program. The first reading of the proposed change of the Constitution and By-laws was carried out, and a vote will be taken at the next meeting.

Communication from Dr. Higbee, relative to the lectures in physiology by Professor Sewall, to be given in San Diego, was read.

Luncheon was served at 11 o'clock.

About forty were in attendance.

Program of the evening was as follows:

"General Use of Obsteric Forceps," by John Vruwink, Los Angeles. Vruwink, being unable to be present, was represented by Dr. Thompson of Los Angeles. Discussion opened by C. P. Engel.

"Cervical Caesarean Section, With Special Consideration of Local Anesthesia, and the Porro Operation," by Stanley N. Pierce, Los Angeles. Discussion opened by Howard Hill.



## SAN DIEGO COUNTY

**San Diego County Medical Society Notes** (reported by Robert Pollock)—The annual election of the County Medical Society and the Medical Library Association on December 8 returned the following officers and directors:

**Medical Society**—President, Mott H. Arnold; Vice-President, C. O. Tanner; Secretary, William H. Geistweit, Jr.; Treasurer, J. C. E. Nielsen. Council: W. M. Alberty, J. F. Grant, D. R. Higbee. Delegates (two-year term): J. C. Yates, G. B. Worthington, Mott H. Arnold. Alternates (two-year term): Thomas O. Burger, E. F. Chamberlain, D. R. Higbee. Milk Commission (five-year term): A. B. Wessels. President-Elect Arnold has not as yet announced his committees for next year.

**Medical Library Association**—Directors: Frank Carter, B. F. Eager, W. H. Geistweit Jr., C. E. Howard, L. Strahlmann, D. R. Higbee, W. S. Keyes, A. H. Gilbert, Robert Pollock, L. H. Redelings, W. O. Weiskotten, Harvey Stallard. Secretary-Treasurer, John C. E. Nielsen.

Following the election the society dined at Ye Golden Lion Tavern, where a few hours were profitably spent on an excellent turkey dinner, with the sauce of good fellowship and the mental stimulus of a scientific program of unusual interest. Dr. J. W. Sherrill reviewed the work done by Collip, in giving to the world the specific extract of the parathyroids. This work has been gone over and verified in every detail by Sherrill in his own laboratories at the Scripps' Metabolic Clinic, and he and Dr. Copp of his staff gave a very clear description of the present status of the extract as a practical therapeutic agent. Discussed by Copp and Sharp. Following this paper Willard J. Stone of Pasadena gave a very interesting talk on "Certain Aspects of Heart Disease," bringing out very clearly the nice differential points in diagnosis, behavior and prognosis of angina pectoris, aortic pain and coronary occlusion. Stone presented this subject in such a masterly way as to leave a very clear impression on the minds of his hearers. Discussed by White, Stealy, and Churchill.

On November 28 Arthur B. Cecil of Los Angeles discussed before the Naval Hospital Medical Staff the subject of vesical diverticula. Dr. Cecil is always a welcome guest in San Diego.

On November 24 the combined staffs of Mercy Hospital and the County General met at the latter institution and enjoyed an excellent clinical program presented by members of the house and visiting staffs.

On December 3 the medical staff of the Scripps Memorial Hospital held its second annual meeting in the comfortable reception-room of the new nurses' home. After a prolonged and spirited discussion of the problems of this our newest hospital a delightful luncheon was served by the management.

Two events of importance are planned for the early days of the new year: A course of lectures on physiology by Dr. Henry Sewell of Denver, whose appearance is made possible by a newly formed medical lectureship bureau; also the Scripps' Metabolic Clinic has invited Dr. William McKimm Marriott, Professor of Pediatrics in Washington University, St. Louis, who will discuss the nephroses. This address will follow a courtesy dinner to the medical profession at the Casa del Mannua, La Jolla, extended by the management of the clinic.



## SAN FRANCISCO COUNTY

**The San Francisco County Medical Society** (reported by J. H. Woolsey, secretary)—During the month of November, 1925, the following meetings were held:

**Section on Medicine**—Tuesday, November 3—Food idiosyncrasies—J. L. Whitney. The medical aspects of ten cases of homicide—Joseph Catton.

**General Meeting**—Tuesday, November 10—Symposium on Allergy: Theoretical considerations of hypersensitivity—Karl F. Meyer. Practical experience versus theory—A. C. Reed. Clinical aspects of allergy—George Piness, Los Angeles.

**Section on Industrial Medicine**—Tuesday, November 17—Some significant factors in derangements of the

shoulder-joint—L. D. Prince. Demonstration of special type of bed for orthopedic cases—R. L. Dresel.

**Section on Eye, Ear, Nose, and Throat**—Tuesday, November 24—Demonstration of cases. A doctor's vacation—H. B. Graham. Indications for the various operations in glaucoma—Otto Barkan.

**St. Joseph's Hospital Staff Holds Pediatric Symposium**—St. Joseph's Hospital staff, San Francisco, discussed advances in pediatrics on December 9, C. F. Gelston opening with "Modern Diagnosis in Pediatrics," stressing the following:

The child is not a small adult, but has a peculiar anatomy and symptomatology. For this reason otitis media must be looked for in every child, especially when too sick for the other signs, as the etiology may be even from gastro-intestinal infections. In mastoiditis the pointing may be odd, also. The urinary tract often affords the solution of symptoms. Pyelonephritis, especially in girls, can cause all symptoms except the organism, in meningitis can produce a persistent fever, and in boys it often indicates a stricture of the ureter or abnormality of the kidney. A diarrhea should be investigated for the Shiga, Flexner, or other germ. Pyloric stenosis is peculiar to children and should be diagnosed early.

A. E. Meyers read a paper on "Progress in Treating Children," the following being a summary: Insulin is the greatest recent advance to benefit children. The addition of acid to milk, to compensate for the neutralization of its buffer contents, was suggested by Faber, who used HCl, and Marriott, who added lactic acid. Other important therapeutic advances are the use of white of egg, cod-liver oil and sunlight in rickets, allowing for correction of deformed legs without operation; the Schick test and toxin-antitoxin vaccination in diphtheria prevention; the scarlet fever work of Dick; the use of thick feedings in pyloric stenosis; the intravenous use of mercurochrome and gentian violet; the serum treatment in pneumonia; endocrine treatment, and convalescent serum therapy in poliomyelitis.

Dunlop Strickler reviewed the "Surgery of Children," with the following resumé: Adenitis is the most common complaint, although cervical glands are less encountered than before, due to the better attention paid to the surgery of the nasopharynx. Hernia, traumatic lesions, infections (as from nails and cuts), and appendicitis next follow in frequency. Chronic appendicitis is rare. The acute form is often associated with a history of cold and the giving of castor oil. Quartz light is used after appendectomy to prevent adhesions. Other operations in decreasing frequency are for empyema, with resection of ribs resorted to seldom; cleft palate, pyloric stenosis, transfusions, hydrocephalic tapping, and intussusception. In the latter, Murphy drip with Week's plan is used.

Ernst Gehrels discussed the two-stage operation for intussusception; Frank Lowe, the surgery of anterior poliomyelitis and correction of rachitic knee deformities with braces; C. O. Southard and Roy Parkinson, the aural and pharyngeal lesions; C. E. Nixon, the neurological considerations, and R. F. Grant and L. B. Crow the abdominal manifestations. Case histories were presented by C. D. Schoonmaker (cholecystectomy) and H. B. Dixon (gas phlegmon after tonsillectomy).

The election of officers for 1926 resulted in the renaming of A. S. Musante as president, Frank Lowe as vice-president, Louis Overstreet as secretary, and F. C. Keck as treasurer.

The program of January 13 will include an address on the "Taking of a Gastro-intestinal History and What It Means," by Walter C. Alvarez, who is leaving California to take up clinical work at the Mayo Clinic.



## SANTA BARBARA COUNTY

**Santa Barbara County Medical Society** (reported by Alex C. Soper, Jr., secretary)—A regular meeting was held at the Cottage Hospital, Monday, December 14, in the staff room, President Nuzum presiding. Fifteen members, three interns, and Dr. Merrill from Santa Paula were present.

Crayton C. Snyder of Pasadena read the paper of the evening, his subject being the rare one of "Bac. Aero-

genous Capsulatus Infection of the Liver." Discussion was participated in by Nuzum, Stevens, and Merrill.

Charles S. Stevens of Santa Barbara presented a rare tumor extirpated from a 12-year-old girl-child, the pathology lying between the dermoid and teratoma classification. Involving all the sexual organs, their complete removal was necessary. Lamb, Allen Williams, and Nuzum discussed.

Dr. Bakewell showed a new non-locking obstetrical forceps, and with a mannikin demonstrated its use.

John M. Van Paing, formerly of the Los Angeles society, and John B. Manning, formerly of the Kings County, Wn. society, were admitted to membership by transfer.

A letter from Mr. George Coleman, requesting endorsement of his work (the American Association for Medical Progress), resulted in a unanimous decision to give him a written endorsement, to be used as he sees fit; however, the question of physicians taking out membership in this lay society was considered debatable, and no formal action on it was taken.

A letter from the Metropolitan Life Insurance Company of San Francisco, offering the use of films for better health education, was ordered answered favorably, the films to be used at the society's annual banquet on January 11 next, and also offered to schools and other agencies.



## SOLANO COUNTY

**Solano County Medical Society** (reported by John W. Green, secretary)—At the December 18 meeting of the Solano County Medical Society the following officers were elected for the year 1926: B. S. Leachman, President; A. V. Doran, Vice-President; and John W. Green, Secretary-Treasurer. John W. Green was elected delegate to the state convention, and D. B. Park, alternate.

## CHANGES IN MEMBERSHIP

**New Members**—Charles C. Fulmer, Edwin F. Mott, Fresno; Mark Gerstle Jr., Ivan C. Heron, Albert E. Larsen, Burgess B. Mason, Herbert H. Schultz, San Francisco; Harold A. Morse, Hilt; Edward Parker Moser, Camino; Clyde G. Reynolds, Repressa; Hans Frank Schluter, Charles Israel Titus, Sacramento.

**Transferred**—Jesse W. Citron, from San Francisco County to Alameda County.

Szabo Kalnan, from Alameda County to Siskiyou County.

Gayle G. Moseley, from Los Angeles County to San Bernardino County.

William E. Musgrave, from San Francisco County to Santa Cruz County.

**Deaths**—Gedge, Donald MacCulloch. Died at San Francisco, December 6, 1925, age 64. Graduate of Cooper Medical School, California, 1892. Licensed in California the same year. Doctor Gedge was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Low, Samuel P.** Died at Santa Barbara, December 6, 1925, age 62. Graduate of Hahnemann Medical College and Hospital of Philadelphia, 1889, and licensed in California the same year. Doctor Low was a member of the Santa Barbara County Medical Society, the California Medical Association, and the American Medical Association.

**Mallory, George W.** Died at Santa Rosa, October 26, 1925, age 66.



GEORGE W. MALLORY

1860-1925

George W. Mallory, 65, prominent Santa Rosa physician and former educator, died at his home October 26, 1925, after an illness of three months. Death followed a stroke of paralysis.

He was born in Mexico, Missouri, received his early education in the schools of Montgomery County, Missouri, and later graduated from the University of Missouri. He came to California as a young man, and for several years was a school teacher.

Doctor Mallory received his Doctor of Medicine degree from the College of Physicians and Surgeons, San Francisco, 1900.

Guy A. Hunt, secretary of the Sonoma County Medical Society, says of Doctor Mallory, that he was a charter member of the Sonoma County Medical Society which, largely due to his efforts while he was secretary, attained the largest membership it has ever had. At the time of his death he was vice-president of the society.

He was a genial and optimistic physician who always greeted the stranger, as well as his friends, with a smile and a hearty shake of the hand. He was a true friend and upright in all his dealings. His interest in man was intense—a trait which is characteristic of every true physician.

Sonoma County Medical Society feels greatly the loss of one of its most prominent and valuable members.

## CONSTITUTION OF THE C. M. A.

Second of two required publications of proposed amendment to be voted upon by the House of Delegates, 1926 session.

Amend the Constitution, Article III, to read as follows:

### CONSTITUTION

#### ARTICLE III

#### Members and Guests

**Section 1. Members**—The members of the association are the members of the component county societies and include all the active, associate and affiliate members thereof. Every member of the California Medical Association (hereafter elected) must hold the degree of Doctor of Medicine from an institution of learning accredited at the time of conferring such degree by the American Medical Association, and must be elected to membership by the component county society of the county wherein



he resides and pay all dues to the secretary of his county society.

Sec. 2. Active Members—Active members shall be elected from those Doctors of Medicine licensed to practice medicine and surgery in the State of California who, in the judgment of the component county society of the county of residence thereof, are deemed of such ethical integrity as is required for such membership. (Except if he lives on or near a county line, a member may, with the previous written consent of the county of his residence, join the society of the county most convenient for him to attend, and such adjoining county shall be included in the term "county of residence" as herein used.)

Sec. 3. Associate Members—Associate members shall be elected from those Doctors of Medicine engaged in teaching or research work or holding position in federal service or otherwise who are not licensed to practice medicine and surgery in the State of California and hence are ineligible to active membership. These members shall have all the rights and privileges of active members, except the right to vote or hold office. Their dues to the State Association shall be one-half the dues of active members, and their dues to their county society shall be fixed by such county society.

Sec. 4. Affiliate Members—Affiliate members shall be elected from those Doctors of Medicine eligible for active membership, but who are, for any reason satisfactory to the county society and the Council of the State Association, entitled to special consideration. These members shall have all the rights and privileges of other members, except the right to vote or hold office. Their dues to the State Association shall be \$1 per year, and their dues to their county society shall be fixed by such county society.

Sec. 5. Honorary Members—Honorary members of the California Medical Association may be elected by the House of Delegates.

Amend the Constitution, Article VI, Section 4, to read as follows:

#### ARTICLE VI

##### Officers

Section 4. No delegate, during his term of service as delegate, shall be eligible to any office named in Section 1 except that of councilor, and no person shall be elected president, president-elect, vice-president, and councilor who has not been a member of the association for two years preceding his election. Every delegate and alternate to the House of Delegates of the California Medical Association must have been a member of the association for one year prior to his election.

Amend By-Laws, Chapter I, Section 1, to read as follows:

#### BY-LAWS

##### CHAPTER I

Section 1. All members of county societies—active, associate, and affiliate—shall, by virtue of such membership, hold corresponding membership in the California Medical Association upon certification by the secretary of the county society of such membership, and receipt by the secretary of this association of the assessment for the fiscal year.

Amend the By-Laws, Chapter I, by adding a new section to be numbered 5, reading as follows:

Section 5. A member who changes his residence from the county through whose society he holds membership in this association to another county in which there is a county society, is eligible to membership in the component county society of his new residence on the presentation of a transfer card, and an official statement that his dues have been paid in full in the society in which he holds membership; provided that no evidence which would otherwise disqualify him for membership arise. He shall forfeit his membership in this association one year after change of location unless he becomes a member of the society of the county to which he has moved. Any member who has heretofore changed his residence, as aforesaid, shall have one year after the date of the adoption thereof to comply with the provisions of this section.

Amend the By-Laws, Chapter VII, Sections 4 and 14, to read as follows:

Section 4. Each county society shall judge the qualifications of its members. However, as such societies are integral parts of this association and all the basis of membership in the American Medical Association, it is necessary that the qualifications meet the minimum requirements of the state and national organizations. These minimum requirements are, that to be eligible for election as an active or affiliate member, the applicant must hold the degree of Doctor of Medicine from an institution of learning accredited at the time of conferring such degree by the American Medical Association, and must be licensed to practice medicine and surgery in the State of California. Every associate member must hold the degree of Doctor of Medicine from an institution of learning accredited at the time of conferring such degree by the American Medical Association, and must not be licensed to practice medicine and surgery in California and hence he ineligible to active membership. A member must not practice or claim to practice or lend his support, co-operation, or in any other way endorse any exclusive system of medicine or any person practicing the same. He shall be honorable and ethical in his conduct and shall subscribe to the principles of medical ethics of the American Medical Association, and shall recognize the Council of this association as the proper authority to interpret any doubtful points in ethics. Every applicant for membership in a county society shall fill out and sign in duplicate the application blanks provided by the society which prescribe the necessary qualifications for membership. One copy of each such application shall be promptly forwarded to the office of this association.

Section 14. Any county society may, in its discretion, elect active, associate, and affiliate members under and pursuant to the provisions of Article III of this Constitution. Any county society may also elect honorary members of its own society, but such honorary members shall not thereby be honorary members of this association.

### Utah State Medical Association

T. C. GIBSON, M. D., Salt Lake City.....President  
W. R. CALDERWOOD, M. D.....President-Elect  
FRANK B. STEELE, M. D., Salt Lake.....Secretary

*Editorials by J. U. GIESY, Associate Editor for Utah*

#### CANCER OR CANNED—SIR?

Parallel investigations of the cause of cancer go forward more or less like Tennyson's brook (forever), yet one hopes that out of the ceaseless endeavor may come yet light on the rather appalling increase of cancer incidence. The English school with its ultra-microscope today seem the main supporters of the micro-organic, the germ, cause of the disease. Comes now a second line of investigation recently published of research along the line of a possible metabolic agency as the causative factor in the origin of this human curse.

For neither side do we hold any brief. Yet the thought that a disturbance of body metabolism may be either the actual cause or a predisposing cause holds a considerable interest. Certain it is that cancer, histologically speaking, gives every evidence of a perverted or disturbed cell metabolism. Years ago Mayo had some thoughts along this line, and now apparently the thing bobs up again, even if in a somewhat different form. Whatever else it is, cancer would seem to be a protoplasmic disease. By this we mean a disease depending upon a perverted or undefined cell development. What is it that actually dif-

ferentiates the definition of the embryonic cell into the typical cell of various tissue types? The answer to such a question lies back of a veil as yet. But it is known that cancer is practically a development of embryonic cells along certain lines without any normal regulation. It is a sort of cellular riot, a cell mob effect. And the basis of all cell development is the protoplasm in the light of modern day knowledge—protoplasm under the governing influence of some differentiating agency, unknown as yet.

Co-equally the source of protoplasm in the organism must be and is—food. Food elaborated in the body laboratory means growth and life. It is, therefore, interesting to note the lesser incidence of cancer among aboriginal races. And it does excite a consideration of the question of foods. The aborigine eats food in a more natural state than man of the civilized races. The question arises, does the uncivilized man, unaware of the modern theories of sterilization and food preservation, eat food in a condition more capable of furnishing to his body the necessary elements for normal nutrition, simply because he eats food containing a protoplasm in a more vitally active state?

And why not? Why should a foodstuff fresh, vital, not contain a protoplasm far more capable of supporting the body's processes, both of nutrition and defense, than a food which has been baked, boiled, steamed, pickled, preserved or pasteurized? If protoplasm is the basis of cell and, hence, bodily life, why should not a live protoplasm be more efficient than one which is half-dead? After all, life is life. And if we kill it out of our food, how can we get it into ourselves? And so we wonder if, after all, we may be largely eating a sort of foodless food today, when so much of our food is "canned" that a home-cooked dinner can hardly be prepared without a battery of can-openers with which to get it out of the little tin coffins in which it has been "scientifically" mummified? We don't really know, but we are tempted to ask the question, Is it possible that civilized man, in his modern efforts to support himself in sanitary safety, is overshooting the mark? Is it possible that, in the midst of plenty, he is actually, in a measure, starving his body cells? Is it possible that it is as much "canned-sir" as cancer in very truth? We don't know, but we think that it's a thing worth thinking about.

### CHOP SUEY HEALTH

Chop-suey, literally or somewhat vulgarly translated, means "table-scrap." Actually, it is a conglomerate mass of food of various sorts. And the health of the modern world is a good deal like that. If we're well, we're well, and if we're not, we're not. Like the Irishman, we dwell under the roof of health during pleasant weather, and when it rains we get wet. But we wouldn't get wet if, once in a while, the roof were inspected and repaired—or at least we wouldn't get so dreadfully wet, perhaps. Entering a new year and in view of the Conference of the Examination of the Apparently Well, recently held in Chicago, one wonders why mankind of this western world doesn't tire of being satisfied with "chop-suey health." He insures and paints his house. He insures his life, and then neglects the very

thing on which it depends—his body—until its roof, which is its health, begins to leak. This is poor conservatism beyond a doubt. He has his automobile inspected and overhauled about every so often. But he fails to have his own life engine given the same attention that he accords to the "old boat." There is a wonderful lot to be said in favor of the effort being put forth to change all this—to induce people to apply common-sense methods to themselves. As to whether the suggestion made at the conference that the average common, garden variety of doctor would be unable to functionate acceptably with his patients, may be justified or not, we don't want to debate. Personally we feel that the average doctor is a pretty good scout. We feel that he would catch a lot of knocks in the human engine submitted to his inspection, which would, if neglected, result in serious trouble unless checked. But the main thing is twofold, to try—each and every one of us in the coming year—to spread the propaganda for a physical examination of the apparently well about every so often, and to educate our patients at the same time in the fact that we are not advocating such a program for self-advantage, to make merely commercial dollars, to point out to them that "prevention" is better than cure, and that by following out such a program they will in the end be saving, not only dollars, but years of useful and reasonably enjoyable life. And so we want to suggest that, to do this very thing, shall be one of the *New Year resolutions* we shall make, and one which, unlike so many New Year resolutions, we shall not break. Chop-suey may be a very excellent food, but scrappy health is a—curse.

### 1824-1925

Born—December 2, 1824—to John and Alice Coe Hullinger, a son. Such might have been the heading in a paper of that date, to herald the advent into life, a hundred and one years ago, of the oldest practicing physician in the United States. They named the boy Harvey Coe Hullinger, and in 1852 he graduated in medicine from a school in Columbus, Ohio, capital of his native state.

In 1859 he and his young wife came to Utah as members of one of the bands of pioneers, crossing the plains and mountains in ox-team wagons to join the Mormons under Brigham Young in the days of the early settlement of this state. Dr. Hullinger has practiced his profession in Utah ever since. But he has done many other things as well, because in the early days the revenue from medical practice was not great. During his first ten years he tells that he received but \$40 in cash, although he received other payments in wheat and other farm products. Similarly, he says that during two years in the southwestern part of the state he took in only 75 cents in cash, and that was from an Indian to whom he sold a pocket-knife. Wherefore, the doctor taught school, cut and sold firewood to help out, receiving a fee of a bushel and a half of wheat for every pupil in his school. Also he journeyed to the shores of the Great Salt Lake and gathered salt and sold it for 5 cents a pound to his neighbors. One had to live.

In 1862 he enlisted and was commissioned a lieutenant, Medical Corps, in the cavalry troop of Lot



Smith. He served until discharged; whereupon, he came back to Utah and his family and continued his practice, opening for a time a hotel in a mining camp.

In 1883 he removed to near Vernal, Utah. Shortly afterward he was officially made a medicine man of the Ute tribe of Indians as a tribute of "Wash," a Ute chief, for saving his life from pneumonia, with which the chieftain was lying at the point of death. Dr. Hullinger is well qualified for the post, as he speaks the Indian tongue as fluently as his own, and has frequently acted as peacemaker in the past, more particularly just after the Meeker massacre in 1879.

Dr. Hullinger is a patriarch indeed, and in view of the fact that he celebrated his hundred and first birthday December 2, 1925, and is still hale and hearty, and still practices his profession among his friends, we cannot resist this opportunity to extend our congratulations and good wishes at this time. The first hundred years are said to be the hardest. Dr. Hullinger should be an authority on this point.

**Utah Notes**—F. Steele, secretary of the Utah Association, has returned from Chicago, where he attended the meeting of the secretaries of the A. M. A., and also the conference for the examination of the apparently well. Dr. Steele had a very pleasant trip, and is quite enthusiastic over the purposes of the latter meeting, insofar as the intent of the movement and its possible influence for a wider scope of preventive rather than curative medicine is concerned.

Ground has been broken for the new Medical Arts building in Salt Lake, and the work of excavating is going on apace. This building, which will be of absolutely modern construction, designed to fill the needs of medical men and dentists in every particular, will fill a long-felt want among the professional men of Salt Lake, and perhaps change, in a measure, the point of view of the average office building management, which heretofore for some time has been that the professional man was a nuisance rather than a desirable tenant. After the building is up there will be about 120 such tenants who will occupy its space.

**Utah First "Over Top" in Medical Reserve Quota**—Utah is the first state in the Ninth Corps Area to "go over the top" in enrolling its quota of Medical Reserve officers, according to a report received Monday from the Ninth Corps Area headquarters at San Francisco by Major S. C. Gurney, chief medical officer of the 10th Division.

Not only has the medical profession contributed more than the number of medical officers called for, but the dental profession of the state has enrolled twice as many dental officers in the Reserve as would be a fair quota for the number of dentists licensed to practice in Utah.

There are four medical department units allocated to Utah, all of which are now in process of organization. One unit, general hospital, No. 61, Salt Lake City, has progressed to an extent warranting the preparation of its plans for mobilization in the early future, it is said.

The Holy Cross Clinical Association held its monthly meeting November 16. A very interesting case of esophageal obstruction was presented, with x-ray plates and the opportunity for fluoroscopic examination of the patient, by Helmina Jeddell. C. L. Shields reported a case of femoral thrombosis, and T. A. Flood exhibited a number of very interesting laboratory specimens.

Meetings of the Wasatch Academy, review group, are being held every Thursday evening as usual from October to April. Every meeting finds much of interest brought out. The presentation of papers and reviews and the exhibition of interesting cases make these weekly meetings a continual pleasure and source of mutual benefit. McHugh is in charge of the meetings and the program of the academy, as in the past.

The committee appointed to consider the program for "Military Night"—the night to be set aside for the purpose of furthering the interest in and recognition of the organized Medical Reserve, as suggested by the Surgeon-General's office through each Corp Area headquarters, met Sunday and arranged to recommend at the next meeting of the Salt Lake County Society that February 22, 1926, be designated as the night for this meeting. It was also decided to arrange a program along medico-military lines. Utah has furnished a large quota of the Medical Reserve in the Ninth Corp Area. Four medical units are allocated to Salt Lake. It is of interest to know also that the Dental Reserve for Utah is way over the top.

**Salt Lake County Medical Society** (reported by M. M. Critchlow, secretary)—A regular meeting of the Salt Lake County Medical Society was held at the Commercial Club November 23, 1925. Meeting called to order at 8 p. m. by President John Z. Brown. Forty-one members and nine visitors were present.

George W. Middleton presented a woman operated on in 1916 for acute suppurative cholecystitis. In 1917 a rubber tube was put in to replace part of the common duct. The tube still remains in place. A gastro-enterostomy was performed this month.

W. R. Tyndale presented a case of pituitary tumor with acromegaly.

Miss A. A. Buffington, secretary of the Family Service Society, Salt Lake City, talked on social service and health. She mentioned the fact that 50 per cent of her cases originated because of ill-health, and illustrated this fact with two case histories. She outlined the management of a case and told what the society does to help, and make her clients help themselves. She deplored the fact that our state has no tuberculosis hospital, no place for the feeble-minded or epileptics, and also the lack of social service facilities in the hospitals. Her talk was discussed by F. H. Raley, E. D. LeCompte, W. R. Tyndale, F. L. Stauffer, L. N. Ossman, S. C. Baldwin, John Z. Brown, and George F. Roberts.

Ray T. Woolsey read a paper on "Puerperal Infection." He cited the morality in various states and countries, and factors favoring infection were fully discussed. He outlined the management and especially the prophylactic treatment. His paper was discussed by S. H. Besley.

F. L. Stauffer reported for the building committee, and outlined the plan for financing.

President Brown announced that Dr. Bigelow of Panquitch desired someone to take his practice for several months. He also announced that the annual election of officers would be held at the next meeting.

W. R. Tyndale moved that the society grant Miss Charlotte Stewart and the physical directors of the city schools the privilege of using the Salt Lake County Medical Society Library. Seconded and carried.

## Nevada State Medical Association

A. J. HOOD, M. D., Elko.....President  
HORACE J. BROWN, M. D., Reno.....Secretary and Associate Editor for Nevada

**Washoe County Medical Society** (reported by Henry Albert, secretary)—The society met December 8, 1925, in regular session in a room in the Y. M. C. A. building, President Vinton A. Muller presiding.

The treasurer presented the annual report, giving receipts and expenditures for the year. The balance on hand is \$43.55. By vote, the report was approved and ordered placed on file.

The following officers were elected for the year 1926: President, Henry Albert; Vice-President, C. W. West; Secretary-Treasurer, J. A. Fuller. Censor for three years, R. H. Richardson. The other two censors are C. E. Piersall for one year, C. W. West for two years.

**Program**—L. A. Emge of San Francisco presented a paper on "Venous Disturbances of the Female Pelvis." It was illustrated with lantern slides. Dr. Emge called

attention to the frequency of this pathological condition; the possibility of mistaking it for chronic inflammation of the various organs of the pelvis, and the treatment of the condition by both non-operative and operative methods. The paper was discussed by Dr. Brown.

Attendance—Members: Albert, Blake, Brown, DaCosta, Fuller, A. J. Hood, W. H. Hood, Huffaker, Morrison, Muller, Piersall, Richardson, Riley, Robinson, Robison, Servoss, Tees, Lehnars, Walker, and West. Dr. L. A. Emge of San Francisco and Dr. Bolt of Berkeley were guests.

Adjournment—There being no further business, the meeting adjourned.

After the meeting, retiring President Muller and his charming wife acted as host and hostess to the members of the society at their home. Refreshments were served and a very delightful social hour was enjoyed.

## M. O. R. C.

**Ninth Corps Area**—California, Nevada, Utah, Wyoming, Montana, Idaho, Washington, Oregon, and the territory of Alaska.

The first unit of the Medical Reserve Corps in the Ninth Corps Area to complete its plan for mobilization is Evacuation Hospital No. 90, San Diego. The Commanding Officer of this unit is Colonel Alfred E. Banks, Medical Reserve, San Diego, who has just been ordered to active duty in San Diego for fifteen days to fill the last few vacancies in his unit and to perfect its organization. With these final steps, Evacuation Hospital No. 90 will be in a position to take the field immediately in an emergency, with a full administrative and professional personnel, each man of which is assigned to an appropriate duty in a well-rounded and co-ordinated service. An outline of the special duties of each position has been prepared, and these are discussed by the incumbents at the monthly dinner conferences held by the personnel of Evacuation Hospital No. 90.

Recruiting for the necessary members of the Reserve Nurse Corps for the unit is now going on. A chief nurse has been appointed, and junior nurses are now being selected.

Much credit is due to the excellent work of Colonel Banks in completing the organization of Evacuation Hospital No. 90. He is now giving valuable aid in the organization of Station Hospital No. 146, which is also allocated to San Diego. The County Medical Society, San Diego, has assumed a sponsorship for both these organizations, and is supporting them in every possible way.

In a recent issue of an attractive eight-page bulletin, issued by the Unit—in itself no small undertaking—we read:

"Evacuation Hospital No. 90 is no longer an ephemeral and purely paper organization. We now have, in addition to allocation orders, and instructions for organizations, an almost complete commissioned personnel according to tables of organization, and it is safe to say that within the next few weeks there will be no remaining vacancies for commissioned officers, medical or otherwise.

"The San Diego County Medical Society, which has fostered this institution, and has provided the medical talent, should, and no doubt does feel something of pride in contemplating the growth and progress of its progeny.

"It is well to remember in this connection that no individual alone can insure a successful career for our hospital. From the chiefs of the Medical and Surgical services down to the enlisted ranks each individual should perform to the fullest extent those peace-time duties which are indicated. It is through concerted effort only that real preparedness will be accomplished.

"Steps have been taken to provide an easy and reasonable method for peace-time training. Co-operation is evident on every hand. Former medical officers of the regular establishment, former emergency officers, and others are volunteering their services in order that instruction may be available on subjects not easily mastered without help on an inactive status.

"One matter which is of importance to the Medical Reserve generally, and which deserves the consideration

of the local profession, is relative to adequate publicity in connection with Medical Reserve affairs, not only local, but throughout the United States. In this connection it has been suggested that the Journal of the American Medical Association and such publications as CALIFORNIA AND WESTERN MEDICINE devote an adequate amount of space to matters pertaining to the Medical Reserve in each issue.

"The American Medical Association Journal gives a sporadic and abbreviated notation under the caption, 'Government Services.' The Reserve is seldom mentioned in this column. It is believed that a healthy amount of publicity carried in the professional journals will do much to promote interest in this very necessary part of our national preparedness program. Remember all communities and sections are not as enlightened as is the case in San Diego County. The medical requirements in case of national emergency demand that this matter receive immediate and sympathetic attention on the part of the editorial staffs of the medical press.

"The Sacramento County Medical Society is sponsoring two hospital trains and two medical laboratory units. Information is not available as to the completeness of the personnel volunteering for these units, but it is encouraging to learn that other cities on this coast are taking the matter of medico-military preparedness seriously. Since, in the event of emergency one of the units above mentioned might easily be responsible for service connected with vacuating patients from this hospital, we are naturally interested in their welfare, and Sacramento has our best wishes.

The first state in the Ninth Corps Area to go "over the top" in enrolling its proportionate quota of Medical Reserve Corps officers is Utah. Not only has its medical profession contributed more than the number of medical officers called for, but its dental profession has enrolled twice as many dental officers as would be a fair quota from the number of dentists licensed to practice in Utah. This more than generous response from the patriotic medical and dental professions of Utah sets a high standard in Medical Reserve Corps matters for the other seven states in the Ninth Corps Area.

There are four medical department units allocated to Utah, all of which are now in process of organization. One unit—General Hospital No. 61, Salt Lake City—has progressed to an extent warranting the preparation of its plans for mobilization in the early future.

The success of Medical Reserve affairs in Utah is largely due to the patriotic energy of Colonel S. C. Baldwin, Medical Reserve, Salt Lake City. The Salt Lake County Medical Society has also formally assumed responsibility for the promotion and support of the four Medical Department Reserve units allocated within that county.

Lieutenant-Colonel Daniel L. High, Medical Reserve, Los Angeles General Hospital, Los Angeles, California, has been appointed Liaison Officer in Medical Reserve Corps affairs for the district of Southern California. Colonel High succeeds Colonel Charles W. Decker, Medical Reserve, Marsh-Strong building, Los Angeles, California, on application of the latter to be relieved by reason of the pressure of other matters.

Some hospital units of the Medical Reserve Corps which are well advanced in their organization and development are holding dinner-conferences monthly, not only for get-together purposes, but for professional information. General conditions in the unit and the Medical Reserve Corps generally are discussed, and this is followed by an address by some member of the unit or some outside speaker on hospital administration, peace-time training, or other appropriate subject. The transactions of one hospital unit are deemed of such importance by the local County Medical Society that they are abstracted and published in its monthly bulletin. On Defense Day the more advanced medical units appeared in parades, and made a very creditable showing. In the recent earthquake at Santa Barbara various Reserve Medical Officers donned their uniforms, reported for duty, were given important duties, and did much to handle the



situation. Besides the national emergency, to provide for which the Medical Reserve Corps was organized, it is very obvious that to have its personnel and units immediately available to meet local emergencies is a great asset to any community. Flood, fire, cyclone, earthquake, and other agencies may at any time exact an unexpected toll. The medical profession should have its organizations of the Medical Reserve Corps ready to give prompt relief in time of such catastrophe.

Captain Edgar P. Murdock, Medical Reserve, Winthrop, Washington, and First Lieutenant Mazel Skolfield, Medical Reserve, Salt Lake City, Utah, have been ordered to active duty, with their consent, for the period December 31, 1925 to April 10, 1926, for a course of instruction as flight surgeons at the School for Aviation Medicine, Mitchell Field, Long Island, New York.

The physical examination of fliers is obviously a most important matter, and its requirements and technique cover many points not included in an ordinary physical examination for the military service. The three months' course in the School for Aviation Medicine is planned to give the necessary special training for this and other matters professionally connected with the flying service.

There is also a short course of six weeks at the School for Aviation Medicine from May 1 to June 15, but this qualifies medical officers merely as physical examiners for the aviation service, and not as flight surgeons. Officers are preferably selected for either course from among Medical Reserve Officers who have taken the preliminary correspondence course, and thereby prepared themselves to some extent for the course in aviation medicine. The present plan is to send three Reserve Medical Officers from each Corps Area to qualify in one or the other of these courses annually.

Prospective flight surgeons are taught aviation physiology, ophthalmology and otology, psychiatry, psychology and cardiology. The instruction received in these branches is of great practical value to any physician, and is equivalent to that obtained at our best post-graduate schools. A wealth of clinical material is available at Bellevue Hospital, the New York Eye and Ear Infirmary, and the Brooklyn State Hospital.

*Medical Reserve Officers ordered for this instruction receive the pay and allowances of their grade and transportation to and from the School of Aviation Medicine. An officer's mess of moderate cost is operated at Mitchell Field, and quarters may be had there.*

In view of the small number of regular army medical officers available as flight surgeons, and the growing needs of the aviation service, it is the policy of the War Department to train a sufficient number of Medical Reserve Officers to perform aviation medical duties. After qualification, they will represent the War Department in the examination of Regular Army, National Guard and Reserve Corps fliers, and the aviation cadets at educational institutions which are members of the Reserve Officers Training Corps. These Reserve flight surgeons will also form the basis of the medical service in the Reserve aviation service.

#### General Hospital No. 139, Zone of Interior:

Major Henry S. Kiersted, Med. Res., 840 Powell Street, San Francisco, Calif., as Assistant to Chief of Medical Service.

Major Archibald A. Atkinson, Med. Res., 1823½ Del Paso Boulevard, North Sacramento, Calif., as Assistant to Chief of Surgical Service.

First Lieutenant Allan R. Watson, Med. Res., Box 214, Eureka, Calif., as Medical Ward Officer.

First Lieutenant Dean M. Walker, Med. Res., Box 440, Sherman, Calif., as Medical Ward Officer.

#### La Garde General Hospital No. 142, Zone of Interior:

Major Chester L. Magee, Med. Res., 402 East Broadway, San Gabriel, Calif., as Assistant to Chief of Surgical Service.

#### General Hospital No. 144, Zone of Interior:

Second Lieutenant Jesse H. Allard, Qm. Res., 805 East Chestnut Street, Glendale, Calif., as Quartermaster.

Captain Herbert A. Repp, Mar. Res., 5408 California Street, San Francisco, Calif., as Adjutant.

#### Eighty-ninth Evacuation Hospital, Sixth Army:

Lieutenant-Colonel Philip S. Doane, Med. Res., 555 Herkimer Street, Pasadena, Calif., as Chief of Surgical Service.

Major John W. Shuman, Med. Res., 820 Westlake Professional Bldg., Los Angeles, Calif., as Assistant to Chief of Medical Service.

Captain Harry C. Smith, Med. Res., 201A West Broadway, Glendale, Calif., as Roentgenologist.

#### Station Hospital No. 136, Communications Zone:

Major Robert W. Fisher, Med. Res., 511 East Third Street, Salt Lake City, Utah, as Chief of Medical Service.

First Lieutenant Ezra E. Duntz, Dent. Res., 611 Templeton Bldg., Salt Lake City, Utah, as Dental Surgeon.

#### Station Hospital No. 142, Communications Zone:

Major Emil O. Jellinek, Med. Res., 2226 Washington Street, San Francisco, Calif., as Chief of Medical Service.

Major William P. Milliken, Med. Res., 3858 Howe Street, Oakland, Calif., as Chief of Surgical Service.

#### Station Hospital No. 146, Communications Zone:

Major William Ruoff, Med. Res., 3204 Dale Street, San Diego, Calif., as Chief of Medical Service.

Captain William A. MacPherson, Med. Res., 3629 Granada Street, San Diego, Calif., as Laboratory Officer.

#### Station Hospital No. 149, Communications Zone:

Major Philip K. Brown, Med. Res., 909 Hyde Street, San Francisco, Calif., as Chief of Medical Service.

Major Gustav J. Bergener, Med. Res., Medical Building, 909 Hyde Street, San Francisco, Calif., as Chief of Surgical Service.

#### Station Hospital No. 150, Communications Zone:

Major William J. Chambers, Med. Res., Palms, Calif., as Chief of Medical Service.

Captain Burdett S. Frary, Med. Res., 5311 Monte Vista Street, Los Angeles, Calif., as Medical Ward Officer.

First Lieutenant William R. McDannell, Med. Res., 1777 West Jefferson Street, Los Angeles, Calif., as Medical Ward Officer.

Captain Louis N. Anderson, Med. Res., 323 East Notwood Street, Inglewood, Calif., as Surgical Ward Officer.

#### Sixty-fifth Surgical Hospital, Third Army:

First Lieutenant George J. Wood, Med. Res., c/o Frank Wood, St. Helena, Calif., as Assistant Operating Surgeon.

#### Sixty-seventh Surgical Hospital, Third Army:

Major William H. Leake, Med. Res., 1143 Poinsettia Drive, Los Angeles, Calif., as Chief of Medical Service.

#### Sixty-eighth Surgical Hospital, Third Army:

Major Robert M. Jones, Med. Res., Silvagni Building, Price, Utah, as Chief of Surgical Service.

#### Seventy-second Surgical Hospital, Sixth Army:

Major George C. H. McPheeters, Med. Res., 1021 Mattel Building, Fresno, Calif., having been assigned to the unit, is assigned as Operating Surgeon.

#### Hospital Center No. 22, Communications Zone:

##### Headquarters

Lieutenant-Colonel Aaron J. Rosanoff, Med. Res., 2007 Wilshire Boulevard, Los Angeles, Calif., as Neuro-psychiatrist.

Lieutenant-Colonel Walter H. Winterberg, Med. Res., 516 Sutter Street, San Francisco, Calif., as Surgical Consultant.

Captain Vincent V. Hardeman, Med. Res., 291 Geary Street, San Francisco, Calif., as Evacuation Officer.

Major John N. Force, Med. Res., University of California, Berkeley, Calif., as Assistant Medical Inspector.

#### Convalescent Camp:

Major Audley O. Sanders, Med. Res., 445 Homer Avenue, Palo Alto, Calif., as Chief of Medical Service.

Captain Robert J. Evans Jr., Med. Res., Bank of Concord Building, Concord, Calif., as Medical Ward Officer.

Captain Edward J. Ghidella, Med. Res., 408 Columbus Avenue, San Francisco, California, as Medical Ward Officer.

#### Hospital Center No. 24, Zone of Interior:

##### Headquarters

Lieutenant-Colonel William H. Roberts, Med. Res., 505 Professional Building, Pasadena, Calif., as Ophthalmologist.

Major Harry N. Krohn, Med. Res., 1104 Edwards & Willey Building, Los Angeles, Calif., as Evacuation Officer.

#### Convalescent Camp

Major George T. Boyd, Med. Res., 1420 Vista Street, Los Angeles, Calif., as Chief of Surgical Service.

Captain Ralph W. Buckman, Med. Res., 7424½ Sunset Boulevard, Los Angeles, Calif., as Medical Ward Officer.

#### Hospital Train No. 55, Zone of Interior:

Captain Michael A. Desmond, Med. Res., P. O. Box 1094, Santa Monica, Calif., as Surgical Service.

#### Hospital Train No. 71, Zone of Interior:

First Lieutenant Amasa M. Bowles, Med. Res., 365 Euclid Avenue, Oakland, Calif., as Medical Service.

First Lieutenant Robert Salinger, Med. Res., 1504 Oakland Avenue, Piedmont, Calif., as Orthopedic Service.

#### Medical Laboratory No. 1 (Aviation), Communications Zone:

Captain Francis J. Delaney, Med. Res., Port Townsend, Wash., as Physiologist.

The following named Reserve Officers, having been assigned to organizations, are assigned within the unit, as indicated:

#### General Hospital No. 47, Communications Zone:

Major Dale L. Martin, Med. Res., 239 Fourth Street, Orland, Calif., as Executive Officer.

Major Fletcher G. Sanborn, Med. Res., 100 North First Avenue, Arcadia, California, as Assistant to Chief of Medical Service.

#### General Hospital No. 144, Zone of Interior:

Lieutenant-Colonel Joseph D. Condit, Med. Res., 284 Palmetto Drive, Pasadena, Calif., as Chief of Medical Service.

#### Eighty-ninth Evacuation Hospital, Sixth Army:

Major Oscar O. Young, Med. Res., 117 South Newlin Street, Whittier, Calif., as Chief of Medical Service.

Major Jackson C. Robertson, Med. Res., 1003 Twelfth Street, Modesto, Calif., as Executive Officer and Fire Marshal.

Major Clarence W. Kellogg, Med. Res., Box 118, East Bakersfield, Calif., as Assistant to Chief of Medical Service.

Major Joseph T. Axline, Med. Res., Box 758, Lankershim, Calif., as Assistant to Chief of Surgical Service.

Major William G. Parker, Med. Res., 5017 Livingston Drive, Long Beach, Calif., as Assistant to Chief of Surgical Service.

Major David A. Baker, Med. Res., 1360 Justin Avenue, Glendale, Calif., as Assistant to Chief of Surgical Service.

Major John Wehrly, Med. Res., 819 Spurgeon Street, Santa Ana, Calif., as Assistant to Chief of Surgical Service.

#### Station Hospital No. 146, Communications Zone:

Major Leighton R. Cornman, Med. Res., 4112 Adams Avenue, San Diego, Calif., as Chief of Surgical Service.

#### Sixty-fifth Surgical Hospital, Third Army:

First Lieutenant Walter O. Trobee, Mar. Res., 601 Castro Street, Hayward, Calif., as Adjutant, Detachment Commander, and Evacuation Officer.

Second Lieutenant George E. Chase, Mar. Res., 142 Sansome Street, San Francisco, Calif., as Registrar and C. O. Detachment of Patients.

#### Sixty-seventh Surgical Hospital, Third Army:

First Lieutenant Frank W. Otto Jr., Med. Res., 853 Lucerne Boulevard, Los Angeles, Calif., as Assistant Operating Surgeon.

The following-named Reserve Officers are relieved from their present assignment, and are assigned as indicated: First Lieutenant Wilford M. Briggs, Med. Res., 109 North May Avenue, Monrovia, Calif., is relieved from Barnes General Hospital No. 141, Zone of Interior, and assigned to La Garde General Hospital No. 142, Zone of Interior, as Medical Ward Officer.

First Lieutenant Solomon N. Weil, Med. Res., Selby, Calif., is relieved from Barnes General Hospital No. 141, Zone of Interior, and assigned to Hospital Train No. 71, Zone of Interior, as Surgical Service.

First Lieutenant Laurence E. Wright, Med. Res., Parnassus and Third Avenue, San Francisco, Calif., is relieved from Army Medical Laboratory No. 4, Sixth Army, and assigned to Medical Laboratory No. 1 (Aviation), Communications Zone.

The following-named Reserve Officers are relieved from assignment to Sixth Army Medical Laboratory, Sixth Army:

Major Alfred R. Rogers, Med. Res., 966 South Wilton Place, Los Angeles, California.

Major Karl T. Waugh, Sn. Res., University of Southern California, Los Angeles, California.

Captain Romeo T. Cook, Sn. Res., 605-606 Detwiler building, Los Angeles, California.

#### Nineteenth Corps Medical Headquarters, Corps Troops:

Lieutenant-Colonel George K. Herzog, Med. Res., 1050 Flood building, San Francisco, California, as Principal Assistant Hospitalization and Inspection.

#### Eighty-eighth Evacuation Hospital, Sixth Army:

First Lieutenant Albert E. Larsen, Med. Res., University Hospital, San Francisco, California, as Evacuation Officer.

First Lieutenant Robertson Ward, Med. Res., 1553 Eighth Avenue, San Francisco, California, as Surgical Ward Officer.

The following-named Medical Corps Reserve Officer is relieved from his present assignment and assigned as indicated:

Major Chauncy M. Benedict, 126 First Avenue, Salt Lake City, Utah, from assignment to Sutherland General Hospital No. 61, Zone of Interior, and is assigned to Station Hospital No. 136, Communications Zone, as Commanding Officer.

The following-named Medical Reserve Officers, having been assigned to the organization indicated, are assigned within the unit as Commanding Officer:

#### Hospital Train No. 22, Communications Zone:

Major Leon G. Seidenfeld, 240 Stockton Street, San Francisco, California.

#### Hospital Train No. 44, Communications Zone:

Major Herbert A. Abbott, 585 Turk Street, San Francisco, California.

People have not yet grown away from the old-time medical mythology, nor are they likely to forego the pleasures and thrills of superstition, or neglect an opportunity to declare their faith in some hocus pocus, especially if its pretensions include the healing of disease, until fairy tales are banished from the nursery.—Editorial, Journal Kansas Medical Society.

If you cannot look evil in the face without illusion, you will never know what it really is, or combat it effectually. The few persons who are able (relatively) to do this are ignorantly called cynics.—Bernard Shaw.

When the wild geese fly they have the sense to follow their leader.—Japanese Proverb.

## NEWS ITEMS FROM THE CALIFORNIA BOARD OF MEDICAL EXAMINERS

C. B. PINKHAM, M. D., *Secretary*

Newspaper reports from St. Louis relate that Robert Adcox, principal in the Diploma Mill, recently confessed, acknowledging his guilt in issuing thousands of fraudulent credentials, and a serial story of his confession is now running in daily issues of the St. Louis Star. Dr. Adcox testified in "Quo Warranto" proceedings brought by the authorities of Missouri to revoke the charter of the St. Louis College of Physicians and Surgeons. In Dr. Adcox's confession he relates his business association with Dr. Frank P. Young of Los Angeles in obtaining Pacific Medical College credentials. Dr. Young's license was revoked by the Board of Medical Examiners October 22, 1924, since which time he has been endeavoring, through court action, to set aside the revocation on technical grounds.

T. Wah Hing, Chinese herbalist of Sacramento, prominently mentioned in connection with the Chinese Herbalist bill which created considerable newspaper discussion during the last session of the Legislature, was recently convicted after a jury trial in Sacramento and was sentenced by Superior Judge Charles O. Busick to three months in the county jail and to pay a fine of \$600. Hing was permitted his liberty under bonds of \$500 pending his appeal. The records show that Hing has been in trouble several times with the federal authorities and Pharmacy Board, as well as having been charged with violation of the Medical Practice Act, his previous conviction having been obtained in 1920.

Court records show that in 1911 T. Wah Hing was convicted of a criminal operation in Sacramento County, the conviction having been set aside on a technicality based on error (on the part of the prosecuting attorney) committed during process of trial.

Newspaper reports relate that the Board of Osteopathic Examiners recently revoked the license of E. A. Leatherwood, based upon a charge of aiding and abetting an unlicensed practitioner, the records showing that Leatherwood was working with Bishop Cosper, who, after rather salacious testimony had been introduced in evidence, was recently convicted in Martinez of violation of the Medical Practice Act and sentenced to pay a fine of \$500 and to serve three months in the county jail, from which sentence he appealed.

"Dr." John Scott Barker, Oakland "Sanitarium Proprietor," convicted in the U. S. District Court March 20, 1924, of selling narcotic drugs, according to Associated Press dispatches from Washington, has been refused a review by the U. S. Supreme Court. He was sentenced to serve five years in Leavenworth Penitentiary.

A complaint was recently filed in Los Angeles, charging A. L. Oxford with violation of the Medical Practice Act, our Investigator Carter relating that Oxford had been accused of negotiating with the widow of Fletcher A. Butler, M. D., who died in San Diego May 31, 1924, for the purchase of Dr. Butler's diploma and prescription blanks, it later being reported that Oxford had obtained possession of the California State certificate issued in the name of Fletcher A. Butler (deceased), and is now a fugitive. State boards have been warned against recognizing the California certificate of Fletcher A. Butler (deceased).

According to reports, an order was recently placed with a firm of photographers in Mexico City through a letter written by an individual in Los Angeles, for an exact reproduction of a diploma of either the National University or the University of Guadalajara, it being specified that the diploma was to be an exact reproduction, including signatures of faculty, but that the name of the individual to whom said diploma was issued should be a blank, in order that the purchaser might enter the name he chose.

An individual named Paul Sandfort has been reported arrested in the City of Berkeley and released on cash bail



in the sum of \$1000. Our special agent reports that at the time of Sandfort's arrest a quantity of surgical instruments, medicines, gold and platinum wire, stationery and cards bearing the letters "M. D.," a folding operating-table, a metal die reading "Paul S. Sandfort, M. D., Ph. D.," etc., were taken on a search warrant.

On occasions during the past several years complaints have come to us that Paul Sandfort, posing as a physician and surgeon, has been violating the Medical Practice Act, both in San Francisco and the southern part of the state.

During our investigation in 1919 the New York Board of Medical Examiners related that an individual named Paul Sandfort, claiming to be a graduate physician from the University of Berlin, had been involved in difficulties in that state.

Under date of Berlin, November 15, 1920, in answer to our letter of inquiry addressed to the University of Berlin, we received the following reply: "I take the liberty to answer that Paul Sandfort did not receive the certificate as a Doctor of Medicine in our university. Yours truly, (Signed) Secretary of the University, Weszel."

In 1920 Paul Sandfort was charged with violation of the Medical Practice Act, it being related that the testimony of witnesses, a large number of surgical instruments, various bottles of medicines, drugs, etc., were introduced; that following a series of continuances asked by counsel for the defendant, the charge was finally dismissed.

According to Associated Press dispatches, John Turner Rose, M. D., was recently apprehended by the federal authorities in Oklahoma and returned to Los Angeles on a charge of violation of the Mann Act. Dr. Rose is not licensed in the State of California, it being reported that he is licensed in the State of New Jersey.

Special Agent Henderson recently reported that Y. Wong and Chew Hing, herbalists, were recently held for trial in the Superior Court of Stockton on a charge of violation of the Medical Practice Act.

Christina S. Loose was reported recently released on \$20,000 bail by the Oakland police, she having been held over to the Alameda County Superior Court for trial on a murder charge in connection with the death of Mrs. W. L. Sweet, wife of an Oakland ballroom owner. Newspaper reports relate that Christina S. Loose claims to be a graduate of a medical college, but thorough investigation fails to substantiate such a claim.

Newspaper reports relate Percy Purviance, Berkeley chiropractor, head of the Berkeley Chiropractic High School and Berkeley College of Chiropractic, is under investigation by the State Board of Chiropractic Examiners, "aimed at revocation of Purviance's California license as a chiropractor on the allegation that he employed fraud and deception in obtaining the license." It is reported Purviance has retaliated by instituting court action attacking the legality of the Chiropractic Board.

James A. McLean, mentioned in the last issue as having been charged with violation of the Medical Practice Act in San Francisco, recently plead guilty and was placed on probation for one year by Superior Judge Pat Parker, sitting for Judge Louis Ward.

Beware of an alleged impostor who is reported to be presenting a letter bearing the signature of a mythical doctor, who relates the bearer is suffering from incipient tuberculosis, and soliciting funds to carry him to Arizona.

Walter N. Thompson, whose sign recently adorned the window of Hotel Rand, 364 Eddy street, San Francisco, was recently charged with violation of the Medical Practice Act. Special Agent Henderson reported numerous surgical instruments and a quantity of medicine in the possession of Thompson, whom Henderson recognized as the same individual who, some few years ago, attempted to open an office on Kearny street, San Francisco, being then in possession of a Harrison Narcotic Registration "Stamp," although he could show no credentials, nor did the records

of the board show such an individual licensed to practice in this state. Query: *How did Thompson secure a 1915 permit to purchase and dispense narcotics?*

Special Agent Carter reports a recent charge of violation of the Medical Practice Act filed against midwife Anna Terrillo, Los Angeles, who is accused of giving pills and capsules for the asserted purpose of relieving pregnancy.

E. B. Martin, self-styled "Cancer specialist," was recently fined \$360, with an alternative of 180 days in the county jail, in the Superior Court of Sacramento, following his conviction of violation of the Medical Practice Act. An interesting statement in evidence related that Martin made his discovery of the so-called "cancer cure" through a mistake of a druggist, who, after compounding two prescriptions, one for external and the other for internal use, had given the external medicine for a cancer patient, who used it internally, and as a result was alleged to have been cured of cancer.

Rose Fritz, an old offender in violating the Medical Practice Act, was recently convicted in the Superior Court of San Francisco and sentenced to pay a fine of \$600, or serve six months in the county jail.

Press dispatches from Los Angeles relate that on November 25, 1925, Harry James Powers, M. D., was arrested by the Los Angeles Police Department on a charge of alleged sale of morphine to dope addicts, dispensing the drug himself instead of giving prescriptions.

Recent press dispatches from Reno, Nevada, relate that "William Kramolin, Southern California physician, plead guilty to charges of embezzlement and theft of a platinum dish from the laboratory of the University of Nevada," and is reported to have been sentenced on October 15, 1925, to serve "not less than two or more than fourteen years in the Nevada State Penitentiary."

William V. Kramolin appears on the records of the Board of Medical Examiners as having been arrested in San Francisco in 1921 on a charge of violation of the Medical Practice Act, the case being dismissed February 24, 1922, on account of refusal of witnesses to testify. Report from the American Medical Association relates that they have no information in regard to "Dr. E. V. or William V. Kramolin."

The District Court of Appeals, San Francisco, on December 1, 1925, in the case of Davis Grisso, M. D., vs. Board, affirmed the judgment which revoked the license of Davis Grisso, October 18, 1923. Grisso's license was revoked in Sacramento County following a hearing based upon Grisso's connection with the Bohannon Cancer Institute, Oakland. Following the revocation, Grisso's attorneys brought action to set aside the findings of the Board of Medical Examiners.

## THE DALLAS SESSION, A. M. A.

### Local Committee of Arrangements

Dr. E. H. Cary, Medical Arts Building, Dallas, Texas, on nomination of the Dallas County Medical Society, has been chosen chairman of the Local Committee of Arrangements. The names of other members of this committee and of its subcommittees will be published later.

### Plans for the Scientific Exhibit

The Committee on Scientific Exhibit calls attention to the fact that those who expect to exhibit at the Dallas session should begin making arrangements sooner than usual, as it will occur the middle of April. Plans for the Scientific Exhibit and Motion Picture Theater Program are under way; as soon as the details have been formulated, further announcement will be made in The Journal. The Circular letter and application blank for the Scientific Exhibit, 1926, will be sent out in about six weeks. Any who desire to receive these should send their names and addresses to Director, Scientific Exhibit, American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

## CORRESPONDENCE

November 25, 1925.

To the Editor—I have read with intense interest your article in the last issue J. A. M. A., and you will know how much it stirred up my thoughts when you read the enclosed letter sent today to the editor of that journal.

With your permission, I think it may be advisable to use part or all of the information contained in your article in a local publicity campaign here in Los Angeles.

With this idea in view, I will take it up with our Publicity Committee in the Los Angeles County Medical Association. We surely do have enough quack advertising by our local newspapers. Why not some that will do the public some real good?

As a member of our local Association of Commerce, I will also take this up with the Medical Committee of that body and secure, if possible, their active co-operation.

FRANK M. WOOD, M.D., Los Angeles.

In his letter to the Editor Journal A. M. A., Doctor Wood says:

November 25, 1925.

"I have read your editorial and the article of Dr. Musgrave of CALIFORNIA AND WESTERN MEDICINE with keen interest, because of its very evident bearing on the future success of our profession.

May I suggest that the success of the campaign now inaugurated by the County Medical Societies, as indicated by your editorial, will depend on the right kind of publicity through effective advertising; to meet that of the numerous commercial public health agencies.

Would this not be most effectively secured by reprinting the article of Dr. Musgrave and distributing it to the general public? Could this not be done at the expense of the County Societies? It seems certain that every member of the A. M. A. would co-operate in this, if such a ready means were at hand to do it in an ethical way.

The main facts disclosed in this article might also be published in health magazines and sponsored by the County Societies in local newspapers, in which the display of commercial health agencies meets the public eye daily.

As a member of our association I am glad to hail this long-delayed movement to restore the regular physician to his rightful place with the public, as the conservator of the public health. I trust it will bear fruit in a wise and legitimate publicity for periodic health examinations by the regular physician. I am convinced that it will succeed only if the advertising shall secure an equal or greater public attention than that of the commercial advertisers. For this reason the within suggestion is offered for what it is worth."

Dear Editor—The M.D. who does as you wish regarding indigents will soon be a damn-sight poorer than 90 per cent of the patients he treats for nothing. It is the county who should care for them, not the poor fish of an M.D.

Note—This letter refers to the editorial "Back to Your Personal Doctor," in the December issue of CALIFORNIA AND WESTERN MEDICINE, particularly to the part which reads:

Since CALIFORNIA AND WESTERN MEDICINE has been agitating similar methods (co-operative plan of the Federated Women's Clubs of Illinois with the Illinois Medical Association and Illinois Dental Society by which the Women's Clubs exert themselves to have all "pre-school" children examined by their own family doctors and dentists in their own offices, instead of attempting to operate health centers, clinics, and generally practice medicine themselves), we have been told that some doctors would not do the work. We don't believe it, but let us find out who they are, if any. There are plenty who will. Again we have been told that some doctors would neither examine nor treat the poor without pay. Again, we don't believe it. But again let's find out who they are, if any. And again, there are plenty who will assume the privilege.

December 7, 1925.

To the Editor—On November 23, there was stolen from my car, parked on Market street, in the nine hundred block, one of the new physicians auto emblem No. 6592. I wrote to the A. M. A. for the number, and they advised that we give you the details that it might be "mentioned in the Journal of the California State Medical Society."

I believe it is the policy to endeavor to keep these emblems out of the hands of non-members. Thank you.

D. BRANDLEY PLYMIRE.

Note—Medical parasites are getting pretty bold when they become so anxious to pass themselves off as members of the C. M. A. and the A. M. A. that they will steal a copyrighted, specially marked, registered automobile plate.

If the thief who uses, it ever has an accident or gets caught he is in for more trouble than he knows of.

To the Editor—To an ex-service man of the late war, the article and editorial in the recent number of the CALIFORNIA AND WESTERN MEDICINE, is of exceptional interest. It urges all of us, especially those of previous experience, to enroll in the M. O. R. C. of the U. S. Army, and laments the lack of interest and tardiness in our not flocking to the colors in a patriotic way.

There are a number of exceptions and criticisms that might be made, in the light of previous experience, by a number of experienced men. It is stated in this article that it is of advantage to get in early in order that one may outrank those who join later. This matter of rank is one that has rankled in a number of breasts since the late war. There were those who, by joining early because of patriotism, sense of duty, or what not, got sent overseas and there lingered as First Lieutenants or Captains until sent home long after the armistice, but had the pleasure, after the war was really over, of welcoming a lot of Majors and Lieutenant-Colonels who no doubt served their country just as well on the American side. Promotions seemed to have been easier and faster in the U. S. A. than in France, and being outranked by men who never heard a shell or saw a wounded man did not sit well. This did not apply alone to the Medical Service, but to other branches as well.

There were some of our professions who had more sagacity than some of us who stampeded early into the service. They stayed out until the need seemed greater, but began their service as Captains, Majors, or higher rank.

It would not be fair to say that the next war may not be different or that the National Defense system, as now planned, may not obviate all such discrepancies. Who knows? It may have been comical to see an eminent surgeon who had been a terror to his interns and nurses wearing a Lieutenant's bar and trying to learn to ride a horse in training camp, while a small-time general practitioner from a small town but with a large pull sported silver leaves, but it makes one think.

Of what particular advantage to the ordinary physician is rank anyhow? In very few instances does the pay remunerate him for the practice he gives up. How many are there who really feel the superiority complex which comes from rank? To all but the few to whom the pomp and glory of a uniform appeals, they simply remain physicians practicing their profession under difficulties. Most of them hated the necessary complicated never-ending rules, orders, regulations, and paper work upon which so many spent the major part of their time. To the other branches of the service, what difference did it make whether the physician who was responsible for the evacuation and treatment of their wounded happened to be a Lieutenant or a Colonel? After all he was simply the doctor, very important when there was fighting and treated with deference during the emergency, but after all a necessary evil and sometimes a nuisance, but never really a soldier.

Why, then, should there be any stress upon rank among medical officers. Suffice to make them all Majors, Lieutenant-Colonels, or simply le Medicin, that they may have some remuneration commensurate to their profession and perhaps expedite such dealings as they have with the other branches of the service.

There can be no question of patriotism in regard to the



medical profession, and those who might knock the service the hardest would probably be among the first to enlist, should there be the emergency. War experience is certainly conducive to hatred of war with its useless slaughter, pain, misery, and sordidness, and maybe has produced a lack of enthusiasm among some of those who saw what war is. We may say with great fervor, "Never again," although we know deep in our hearts that except for such disabilities as might disqualify us that we could not be kept out of any war in which our country might engage.

WALTER PARRY GUY, M. D.

4362 Melrose Avenue, Los Angeles.

*Note*—In submitting the above, Doctor Guy writes:

In sending you the enclosed copy, which you may use or not as you see fit in the circumstance, I trust you will not see anything but the kindest comment upon your article and editorial. My own experience in the late war was one which leaves me no regret. The remembrances in connection with it are priceless. It is one of the outstanding features in my life. Still, I am candid to state, I should hate to do it again.

To the Editor—I wish to add a few words of praise for your department of medical discussions or, as you call them, "Conversaciones." Although I am in a specialty (urology), I shall read them with interest, because it will be a means of keeping in touch with the active questions in medicine. Don't you think the title "Bedside Medicine for Bedside Doctors" is a bit large and unwieldy? What would you think of the suggestion, "The Bedside Forum."—A. A. K., Los Angeles.

"To the Editor—In regard to the 'discussions' which follow each published article, allow me to express a few thoughts.

I find that these discussions are an excellent innovation and an instructive measure to learn the opinions of different men in the field of medicine or surgery to which they devote most of their time. I therefore never miss reading the entire 'discussion.' But unfortunately, and to my disappointment, I so often find that the discussant repeats either most or much of what he thinks he has to say from the article which has been submitted to him for discussion. Much time is therefore wasted in reading the entire 'discussion' and much valuable information is lost, since the discussant does not attempt to give of his own knowledge and experience sufficiently.

These remarks, dear doctor, are not expressed as a criticism; on the contrary, I utter them only in a constructive sense and hope that you may be able to encourage the discussants to be a bit more original and offer more of their personal experience."—A. Gottlieb, Los Angeles.

#### COMMENT

The suggestion made by Doctor Gottlieb is a good one, and we have added a paragraph to our usual letter to discussants, asking them to include in their discussion not only the author's contribution, but the *subject* he intended to cover, and to disagree with him where they think disagreement is indicated and to add anything that has not been previously brought out by the author or by a previous discussant. Repetitions and quotations in such direct discussion are uncalled for. We feel certain that our discussants will bear this in mind and co-operate with us to the constant betterment of CALIFORNIA AND WESTERN MEDICINE.

#### AN IMPORTANT COMMUNICATION FROM THE BOARD OF MEDICAL EXAMINERS

To the Editor—There has been considerable agitation in certain sections of California in regard to licensed physicians and surgeons who have been charged with violation of either the Harrison Act or the State Pharmacy Act, as a result of their indiscriminate and quite lavish use of narcotics in their practice. We are wondering whether you should see fit to write an editorial for CALIFORNIA AND WESTERN MEDICINE, which might bring to the

attention of the medical profession of California the indiscretions of certain individuals, sadly reflecting on the entire medical fraternity.

The records show in some instances that narcotics are purchased in wholesale quantities by certain licensed physicians, and in other instances that prescriptions are written indiscriminately. When these individuals are charged with violation of the law, there seems to be a number of reputable licentiates, undoubtedly unfamiliar with the facts, rallying to the support of the accused, with the result that considerable ill-will is engendered.

There is no doubt but that the medical profession is always active in discouraging irregularities within its ranks. We feel that this situation is one which demands careful elucidation, so far as the rank and file of the medical profession is concerned, it being conceded that the physician and surgeon violators constitute but a very small portion of those engaged in illegal narcotic transactions. The lay violator, of which there is a large number, as a rule has no standing in a community, and hence is given no newspaper notoriety, which places the preponderance of publicity on the shoulders of the very small minority of physicians who transgress the law.

It might also be well in such an editorial to comment on the frequent statements made by licentiates called before the Board of Medical Examiners to show cause why their license should not be revoked, based upon charges of violation of the narcotic laws, that such licentiates have been urged to plead guilty and thus avoid notoriety. The majority state they have been further advised that, if a plea of guilty to the narcotic charge is entered, the case will go no further, they not being advised, however, that such a plea of guilty *automatically* places them (under Section 14 of the Medical Act) before the Board of Medical Examiners for a hearing to show cause why their license should not be revoked.

Very truly yours,

CHARLES B. PINKHAM, M. D.,

Secretary-Treasurer California Board of Medical Examiners.

#### MEDICAL GOLFERS, ATTENTION!

At a meeting of the San Francisco County Medical Golfing Association recently, following a tournament at the California Golf Club, the Northern California Medical Golfing Association was formed. Its purpose is to hold tournaments in various parts of Northern California at frequent intervals and also to play against other organizations (the dentists and the lawyers both have active golf associations). Eventually it is hoped to have contests with the Southern California Medical Golfers. Under the leadership of James Eaves the local organization (which was absorbed recently by the new association) meetings the past two years have been very successful. Besides affording opportunities to play on various courses, the tournaments and dinners have brought the men together in a spirit of good fellowship. The success of these meetings naturally led to the program of expansion and increased activities just adopted. Members of the California Medical Association residing north of the Tehachapi are eligible for membership. Applications may be sent to the Secretary, Suite 320, Medico-Dental Building, 490 Post street, San Francisco. The following officers were elected: President, Phillip N. Pierson; Vice-President, Clarence A. De Puy; Secretary, Harry E. Alderson; Treasurer, James Eaves; Handicapper, Wilhelm Waldeyer; Tournament Committee—Elbridge Best, Harold K. Faher, LeRoy Brooks.

The cynic is the one who never sees a good quality in a man and never fails to see a bad one. He is the human owl, vigilant in darkness and blind to light, mousing for vermin, and never seeking noble game.—Henry Ward Beecher.

What we need is not unethical individual advertising, but collective publicity, issued by medical societies.—Lucius F. Donohoe, Journal Medical Society, New Jersey.

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# CALIFORNIA AND WESTERN MEDICINE

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## PROPHYLAXIS AND TREATMENT OF WOUND INFECTIONS BY MODERN METHODS

By K. F. MEYER,\* PH. D.

(From the George Williams Hooper Foundation for Medical Research,  
University of California Medical School, San Francisco)

*TOO many people die from infection with anaerobic organisms. That the majority of patients with the kind of wounds in which such infection thrives never even consult a doctor suggests a vast public ignorance which ought to be replaced by elementary knowledge.*

*That five of the doctors who treated the 148 patients reported by Doctor Meyer failed to render adequate service shows one of several possible situations that also should be corrected.*

*All the essential information available about the dangers and methods of prevention and treatment of this remarkable group of infections is given here in a strikingly effective and interesting manner. In this splendid and timely essay Meyer has not only "briefed" our knowledge of the subject in an authoritative and attractive manner, but he has led us to the mountaintop and unfolded an inspirational view of possibilities to us.*

*There is a message here for every physician, and I wish we had a "rewrite" of it suited to the public.—EDITOR.*

RECENT experimental and biological studies have apparently resurrected old principles by which wound infections, due to earth and dirt contamination, can be prevented or cured. It is now recognized that three, possibly four, sporulating anaerobes—*B. tetani*, *B. welchii*, *Vibrio septique*, and *B. oedematiens*—may provoke some of the most dreaded infections. Frequently, these bacteria act together, and through their combined effect produce the symptom complex of gas gangrene. On the other hand, *B. tetani* frequently acts independently; it remains the dominant factor in accidental injuries and, therefore, deserves first consideration.

### PROPHYLAXIS OF TETANUS AND GAS GANGRENE

In 1922, W. J. Stone<sup>1</sup> of Pasadena reported his observations on forty-nine patients with tetanus who were admitted to the Los Angeles County Hospital during the interval from March 22, 1916, to December 7, 1921. His very interesting report indicated a high incidence of tetanus in the southern part of California which deserved further investigation. Prior to 1922 an examination of soil specimens collected from the South, in connection with another problem, showed that the spores of *B. tetani* were quite common in the soil of the region surrounding Los Angeles. Specimens of earth collected from other parts of the state gave, with one or two exceptions, negative findings. It appeared of interest to determine, if possible, the relationship of the soil contamination to the incidence of human tetanus.

The State Board of Health has collected, since June, 1922, detailed histories of the reported cases of tetanus. We are greatly indebted to Miss Ida May Stevens, Assistant Epidemiologist of the State Board of Health for the painstaking collection of the data which she has recently turned over to us for analysis. Although the reports were mainly intended for a study of the distribution of the cases and the types of the injuries which were responsible for tetanus, a scrutiny of the data revealed the existence of conditions which cannot be ignored. Since this presentation deals with a general subject and not with tetanus alone, a few of the most significant points intended for discussion are summarized in Tables I and II.

Tetanus is more common in the southern and central than in the northern part of California. Over 50 per cent of the 148 cases reported during the interval between June, 1922, and March, 1925, occurred in the region below the Tehachapi and in the vicinity of Los Angeles, while in the central and northern part persons contracted their infections mainly in the San Joaquin and the southern part of the Sacramento Valley. The data are not sufficiently complete to conclude definitely that a seasonal incidence prevails. There is a definite tendency for more tetanus cases to be reported during July, August, September, and October than during January, February, March, and April. This may be due either to the difference in the temperature, to greater exposure to dust, or it may result from an increased consumption of food used in an uncooked state and which has directly or indirectly been in contact with the earth. In this connection it is well known that the more tropical the climate the greater the inci-

\*Karl F. Meyer, San Francisco, Ph. D. University of Zurich. Practice limited to research. Hospital connections: University of California Hospital. Appointments: Professor of Bacteriology, University of California; Director of Hooper Foundation. Publications: Approximately 100 publications, mostly in Journal of Infectious Diseases.



dence of tetanus. A perusal of the literature clearly shows that the Southern States on the whole have more cases of tetanus than the Northern States. The California data bear that out.

Concerning the source of infection, one is tempted to say a great deal. *Nineteen cases of tetanus neonatorum in two and one-half years suggest that a primitive type of delivery is still practiced in certain strata of the population.* Vaccination was followed by two cases of tetanus, although the vaccine was furnished by a reliable manufacturer. The seven cases of the disease in drug addicts merely confirm Doane,<sup>2</sup> who treated three cases of tetanus out of four thousand patients under his observation. More alarming are the eight post-operative cases of tetanus. According to two histories, the catgut has been held responsible, although bacteriological tests cleared the suture material of every suspicion. In this connection it is recalled that very few instances of infected catgut have been proved. In the light of the recent studies by Pizzini, Tulloch<sup>3</sup> and Tenbroeck<sup>4</sup> it is more reasonable to suspect the intestinal canal of the patient himself as the source of the post-operative tetanus. The cultural demonstrations of the microbe in sutured wounds merely proves that the catgut and the wound secretions are ideal culture media for the bacillus tetani, which has gained access from another source. *Since it is now definitely established that tetanus spores or any other gas gangrene producing anaerobe ingested on raw vegetables may multiply in the intestinal tract and remain there in large numbers, the surgeon should fully appreciate this insidious source of wound infection before he suspects his surgical instruments, sutures, and dressings.* It is not unlikely that many of the post-operative anaerobic infections are from within, e. g., the intestinal canal of the patient, and not from without. How to prevent the occurrence of these infections is as yet an unsolved problem which urgently deserves experimental investigation.

The data as a whole emphasizes anew the well-known fact that relatively trivial injuries may lead to tetanus. Unfortunately, the records are incomplete, but it is evident that the mortality is very high. In a few instances the incubation time was short or the injury was located on the head or face, all factors which may well have been responsible for the high death rate. However, the most deplorable condition which was recognized from the analysis of the data is the fact that only three, possibly four, people who received puncture wounds, lacerations, contusions, or compound fractures of the type considered most liable to tetanus infection had the benefit of a prophylactic injection of antitoxin. *The majority of the patients involved in this series never consulted a physician, and either ignored the injuries or treated them by unknown remedies.* On the other hand, at least five physicians failed to give antitoxin, although the character of the injury (compound fracture, deep nail puncture) should have aroused suspicion of the possible consequences. Furthermore the prophylactic treatment was not conducted in accordance with the established practice, and one is forced to conclude that those responsible were not familiar with the basic principles of the

prevention of tetanus. A brief resumé may, therefore, be justified.

#### APPROVED PROPHYLACTIC METHODS

War experience established the wisdom of a prophylactic dose of anti-tetanic serum for all wounds contaminated with earth, clothing, etc. As to the size of the immunizing dose, the order issued in 1917 by the British war office was that 500 units be given every seventh day for four doses. Later on this amount was increased to 1500 units, the usual dose also employed on the soldiers of the American Expeditionary Forces in France. The official history of the British War Department says that there was no improvement by reason of the larger dose. The statistics of the earlier period of the war have fully established that the incidence of tetanus fell remarkably when immunization began. But this striking reduction in the number of known cases does not tell the whole story of the benefits of prophylaxis. The period of incubation was lengthened; the persons receiving the larger number of inoculations the disease was more chronic, hence the patients had a better chance for life. Aschoff and Robertson<sup>5</sup> claim that, since there is strong experimental evidence to show that in about ten days the immunity conferred by the primary injection is to a great extent lost, a second injection should be given eight days after the injury. *When it is used methodically, tetanus antitoxin will prevent early as well as late tetanus with a reliability that borders on certainty.* The danger of anaphylactic reactions, due to repeated injections of horse serum, is greatly overestimated. Sir David Bruce<sup>6</sup> in one of his analyses has calculated that some two million prophylactic doses were given in England alone; only seven cases of anaphylaxis were reported, not one fatal. It may be said that the danger of anaphylactic death is negligible if the prophylactic dose is contained in as small a quantity of horse serum as 3 cc.

Aside from the conditions just enumerated, the failure of prophylactic antitoxic treatment may be due to (1) concomitant anaerobes in the devitalized tissues and (2) impotent antitoxin.

As the war experience with the prophylactic use of antitoxin proceeded, it became quite evident that there were cases of tetanus in which the wounds were not freed of devitalized tissue. Since it has been proven by the studies of Tulloch<sup>3</sup> that dead tissue sometimes produced by other anaerobes may be a habitat for *B. tetani*, it is imperative that in the prophylaxis of tetanus, in fact, in any anaerobic infection, the wound receive thorough surgical treatment. As soon as this principle was fully appreciated during the war the tetanus incidence dropped to a very low level.

Two new thoughts regarding the treatment by antitoxin are suggested by some recent studies. Since the ancillary part played by *B. welchii* in a number of cases of tetanus is clearly demonstrated by the work of Tulloch, it is desirable that the antitoxic and anti-bacterial properties against this anaerobe should be included in the anti-tetanic serum. Apparently, there is little demand for such a preparation, as only one private New York firm has thus far placed on the market a dependable but

very expensive double serum. By means of agglutination tests, Tulloch has reported four, and Tenbroeck and Bauer<sup>7</sup> five serologic types of *B. tetani*. Tulloch has shown that the antitoxin prepared by the injection of the toxin produced by one type of the bacillus neutralizes the toxin formed by the other. While he has not been able to show conclusively that anti-bacterial as well as antitoxin antibodies are desirable in prophylactic and curative sera, his findings point to this and also to the fact that the anti-bacterial antibody is specific for the type of bacillus used for its production. This is unquestionably a very important point worthy of more elaborate investigation. It is well known that the most efficient antiserum for the treatment of gas gangrene was produced by the inoculation of whole cultures, and not merely by the use of the toxin of *Vibrio septique*. The serum is anti-bacterial and anti-toxic. *On theoretical grounds it is not unlikely that an anti-bacterial serum against one strain may be of little value against the six types found in California.* A polyvalent serum would probably act more efficiently and possibly also more specifically. This aspect of the tetanus prophylaxis can receive attention as soon as such sera are available. As far as is known, no institute has as yet undertaken the manufacture of such a preparation.

The prophylaxis of gas gangrene in civil life depends mainly on the early and complete removal of the devitalized tissues from the wounds. Polyvalent sera are not available in the United States, and the use of monovalent *B. welchii* serum is frequently followed by disappointment, since the preparation lacks the antibodies to combat the more toxic and invasive *Vibrio septique* and *B. oedematis*. The latter bacteria are frequently associated with *B. welchii*, and it is by no means easy to recognize the mixed infection by simple bacteriological tests. The use of a polyvalent serum, as manufactured by the Institut Pasteur, by Leclainche and Vallée, however, is practical, and according to numerous reports in the literature<sup>8</sup> it is followed by remarkable results. Since lives can be saved and high amputations prevented, it is worth the effort of the medical profession to encourage a recognized laboratory to manufacture such sera in the United States. Until such a preparation is available, a patient with gas gangrene must be treated by physical and chemical antiseptics.

#### THE USE OF ANTISEPTICS IN PROPHYLAXIS AND TREATMENT OF WOUNDS

It is now fully recognized that amykosis of any wound, in the sense of Lister, cannot be secured, nor is it necessary. Every accidental wound is infected, and its treatment can only be accomplished by antiseptics or disinfection. The procedures in vogue aim to destroy the causative organisms and to cure the disease which is caused by the infection. Theoretically, this result can be accomplished by eradicating the invasive parasites or by increasing the resistance of the invaded host. As a rule, a combination of both procedures gives the best results. According to C. Brunner<sup>9</sup> two methods of antiseptics are now employed, (1) physical and (2) chemical disinfection. The first is based on the ob-

servation of Friederich and Sacquépée that superficially bruised or devitalized muscular wounds contaminated with earth or dust show a definite incubation time of infection. Anaerobic bacteria begin to grow in the tissues between the seventh to the eleventh hour, while aerobes may not become established until the eighteenth to the forty-eighth hour. Early careful operative excision of the devitalized tissues, painstaking wound inspection, followed by drainage, prevents, in many instances, the development of dangerous infections. A casual review of the literature, however, leaves one with the impression that most surgeons feel the uncertainty of the physical method of disinfection and they supplement or enhance its value by the use of antiseptics. On the other hand, there are numerous reports available which deny the usefulness of the chemical procedures. In fact, it is claimed that they are directly harmful by creating new foci of necrotic tissue in which the protected bacteria grow freely. However, everybody agrees that a less destructive mode of antiseptics than excision would be exceedingly valuable. Even today it is unfortunately impossible to gain a proper perspective of the value of the various antiseptics which have been recommended. Frequently, successes have been attributed to chemicals, when in fact the thorough mechanical cleaning of the wound has probably been responsible for the beneficial outcome of the infection. Preparations are quite often praised by the manufacturer or the surgeon, because the principle of an active instead of a conservative wound antiseptics is more intensively practiced than has hitherto been the case. Without any fear of contradiction, it can be said that this state of affairs will only change when the problem of chemical wound antiseptics is approached from an experimental point of view. A number of interesting attempts along this line have been made during the past four or five years.

C. Brunner,<sup>10</sup> who has devoted his life to a study of wound infections and their treatment, specifies that a disinfectant suitable for this purpose must have either one or several properties. At least it must possess:

(1) *Prophylactic Action*—The chemical, when introduced into an injury, must prevent a subsequent disease in case the wound becomes infected.

(2) *Preventive Action*—The antiseptic must be capable of preventing the development of the disease even when it is introduced into the wound after the infection has taken place.

(3) *Local Therapeutic Action*—A disinfectant, when applied to the wound, must arrest the progress of the infection, enhance the local mesodermal inflammatory processes and cure the disease.

(4) *General Therapeutic Action (Chemotherapy, in the Sense of Ehrlich)*—The chemical compound introduced, either by the subcutaneous, intravenous or intramuscular route, must be capable of stopping the infection in the tissues of the wound, the blood stream, and the internal organs.

In studying an antiseptic it must also be kept in mind that the following points have to be decided:

(1) What is the effect on smoothly cut or on necrotized skin and muscle wounds? (2) Is the preparation of value for surface and tissue antiseptics? (3) Is the effect mono- or pan-therapeutic? In other



TABLE I  
Distribution of 148 Cases of Tetanus in California

Year (July-December)	Children				Adults 10M.; 6F.	Prophylactic antitoxin treatment	Northern	Central	Southern	Antitoxin treatment	Mortality
	1-4	5-9	10-14	15-20							
1922	2F. 1M.	5M. 1F.	2M.	1F. 1M.		0	2	10	17	24	77.1%
1923	5F. 6M.	7M. 13M.	3M.	4M. 3M.	14M.; 2F. 20M.; 7F.	1 3	1 4	15 29	28 32	28 25	78.2% 66.6%
1924	5F. 1M.	3F. 1M.	1F.		2F.; 4M.	0	1	4	5	5	55.2%
1925	1F.	1F.									
Total				148		4 (?)	8	58	82	82	69.3%

words, does it specifically destroy one or all types of wound bacteria?

The most difficult and most complicated experimental conditions were chosen for the first series of experiments. Brunner, who recalled from his practice the many deaths and amputations which followed injuries contaminated with soil, studied this type of infection on animals. Probably influenced by Schimmelbusch, Gottstein, Lebsche,<sup>11</sup> and others, he attempted to prevent the development of tetanus and gas gangrene in guinea pigs, by either applying the antiseptic simultaneously or after a lapse of from three to eighteen hours. In a large series of animals a cut 3 to 4 centimeters long was made through the skin and muscles of the back. A definite amount of dried soil, which contained the spores of *B. tetani*, *Vibrio septique*, and other intestinal organisms in known quantities was rubbed thoroughly into the wound. The guinea pigs were subsequently treated for varying periods with antiseptic solutions or powders. A number of preparations prevented the development of a disease or produced complete cures. Iodin in the form of the official tincture, or preferably 5 per cent iodine in 70 per cent alcohol, iodoform, and especially isoform, exhibited remarkably preventive properties against soil infections. In the first experiments guinea pigs were saved six hours after the injury was made. In later tests with isoform a number of animals treated on the eighteenth hour after the wound contamination recovered. One per cent iodine trichloride was preventive up to the third, pyocyanin (methyl-violet) up to the ninth hour, while Dakin's solution acted only when applied simultaneously with the infectious earth. Dichloramine was apparently not tested.

Brunner, Von Gonzenbach, and Ritter have carefully studied the manner and the mode of action of the iodine by combining the animal experiments in vitro tests and by careful histological studies. They concluded that the iodine is anti-infectious, not by destroying, but by detoxifying and by inhibiting the growth of the spores and by stimulating the defensive mechanism of the wound tissues. The latter function is probably a very important one, since it is well known that non-specific irritation of the mesodermal tissues calls forth a group of cells, which, in the light of recent studies on local immunity, is recognized as particularly active in removing invasive bacteria. Such a mechanism was

probably responsible for the successes reported in some of their experiments conducted with anthrax spores. Guinea pigs infected by the same procedures, with anthrax spores instead of soil, were saved when 1 per cent iodine alcohol was applied not later than the seventh hour after the infection. Since *B. anthracis* produces no definitely demonstrable toxins, the experimental results cannot be attributed to any particular detoxifying action of the iodine, but are probably due to the bacteriostatic properties of the drug which constantly emanate from the deposits formed on the living tissues. This storage is responsible for the prolonged and penetrating action, which is characteristic for iodine. Furthermore, the chemical is pan-therapeutic, it acts on aerobes as well as on anaerobes. Brunner and Von Gonzenbach furnish, for the first time, *experimental proof that prophylactic and preventive antiseptics can be accomplished*. In fact, Brunner reports some very striking preventions of human wound infections which he had an opportunity to observe in his extensive rural hospital practice.

These experimental studies and clinical observations should again restore confidence in the prophylactic use of alcoholic iodine solutions. During the war this chemical was condemned because it exhibited little or no penetrating properties, and since it failed to sterilize devitalized tissues or to free suppurating wounds from streptococci. There is still the fear of iodine idiosyncrasy, which, although exceptionally rare, may produce in a patient symptoms ranging from local lesions to death.

Brunner and Von Gonzenbach have shown that the antiseptic effect of iodine is less in the presence of necrotic or devitalized tissues, but they failed to find any other preparation which under the conditions of the experiment would act prophylactically as well as iodine. They freely admit that, for the treatment of wounds with necroses, Dakin's solution cannot be displaced, although the preparation when used as a preventive is unsatisfactory.

In a recent paper Brunner<sup>10</sup> discusses the value of a few of the newer antiseptics as preventive and curative wound disinfectants. In carefully planned experiments he tested vuzin (quinine alkaloid), tryptaflavin (diamino-methyl acridine chloride), and rivanol (two ethoxy-diamino acridine) in solutions, powders, and even in form of deep-tissue injections, according to the principles suggested by Klapp<sup>10</sup> and Morgenroth. His conclusions are of such impor-

TABLE II

Types of Injury Responsible for Tetanus in 148 Cases

	July- Dec. 1922	1923	1924	Jan.- Mar. 1925
Punctures on feet and limbs due to—				
(a) Nails and wires.....	5	8	17	1
(b) Splinters or slivers.....	0	3	3	—
(c) Toy harpoon or hook.....	1	1	1	—
(d) Fence post.....	—	—	1	—
(e) Safety-pin.....	—	—	1	—
Punctures on hands and arms due to—				
(a) Splinters, slivers or thorns.....	4	5	2	—
(b) Barbed wire.....	—	1	1	—
(c) Hypodermic needle.....	—	1	5	1
Punctures on head.....	—	—	2	—
Lacerations on—				
(a) Fingers.....	0	5	2	—
(b) Head and face.....	0	1	2	—
(c) Limbs and feet.....	—	2	—	1
Contusions of—				
(a) Toes.....	0	—	2	—
(b) Fingers.....	3	1	3	1
(c) Leg ulcer.....	1	—	—	—
Compound fractures—				
(a) Radius.....	—	—	2	—
(b) Fingers.....	—	2	1	—
(c) Femur.....	—	—	1	—
(d) Toes.....	—	—	1	0
(e) Nose.....	—	—	—	1
Blisters on heels.....	1	1	1	1
Burns—				
(a) 2nd degree.....	1	—	1	—
(b) Electrical.....	1	—	—	—
Gunshot wounds.....	1	2	—	—
Injury to mucous membrane of nose due to newspaper.....	—	1	—	—
Infected umbilicus.....	3	8	6	2
Criminal abortion.....	2	—	1	—
Operations—				
Hysterectomy.....	3	—	—	—
Gastro-enterostomy.....	1	—	—	—
Hernia.....	—	—	1	—
Amputation of foot (sarcoma).....	1	—	—	—
Tubercular hip.....	—	1	—	—
Curettage.....	—	—	1	—
Vaccination.....	—	—	2	—
Unknown.....	1	1	5	2
Total 148 cases.....	29	44	65	10

tance that it appears justifiable to detail the essential points. Trypaflavin and rivanol are interesting antiseptics with pronounced elective action on streptococci, less on staphylococci. Rivanol is less toxic than trypaflavin and possesses protective properties when used in powder form. Both exhibit antimycotic action when used as surface disinfectants, but their effect is frequently restricted on the coccal flora, leaving the gas gangrene bacteria unaffected. As disinfectants for wounds already infected, rivanol, trypaflavin, and vuzin failed to surpass iodine; an exception is made in the lesions specifically invaded by streptococci. When used as a deep-tissue antiseptic, it was noted that the usual concentration of rivanol (1:1000) was insufficient; concentration of 1:400, on the other hand, produced extensive necrosis and severe inflammatory processes. The necroses are saturated by the dyes, and as such act as storage places for the disinfectant. In combination with the tissue reaction—extensive lymph and cellular immigration—the disinfectant may arrest an infection, but the same result with little or no necrosis has also been secured with iodine-alcohol. The two disinfectants, vuzin and rivanol, when tested clinically failed utterly—even when used in concentrations (1:400), which produced profound and

painful necroses. The only promising preparation is trypaflavin, which gave clinically similar results to those reported by the English workers during the war.

It cannot be denied that the experimental studies of Brunner indicate the means which must be chosen in order to evaluate a new antiseptic. Probably very few would stand this rigid test. Even the now famous mercurochrome would fail in this respect. Since Brunner's results have demonstrated the great prophylactic value of iodine solution, it is imperative that the prophylaxis of tetanus should include iodination of the punctures, etc., provided they are not too large and favor intensive absorption. It may be advisable to instruct the laity that iodine alone, and not any other brownish-colored antiseptic, is of value in the prevention of lockjaw. Carbolic acid is still used, since Bacelli recommended it in the treatment of tetanus, although Sir David Bruce says in one of his reports: "There is no evidence that benefit accrued to the cases treated by carbolic acid and magnesium sulfate injections." Prophylactically, carbolic acid is of no value. Emberton and Thiele<sup>12</sup> found that when the wound on a guinea pig artificially infected with tetanus spores and swabbed with carbolic acid 1-20 in two minutes, the animal was not protected. Rather than trust to antiseptics, a much more important step is the wound examination, the excision, if necessary, and the serum prophylaxis.

Before leaving this subject a few words should be said concerning the possible value of Pilcher's<sup>13</sup> quinine-hydrochloric—acetic acid—formol-alcohol solution in the treatment of gas gangrene. This preparation is exceedingly interesting from many points of view. According to the published clinical records, it is quite actively inhibitive and destructive to both aerobic and anaerobic bacteria, quite unirritating, perfectly stable, easy of preparation, and mildly deodorant. It apparently causes a definite flow of fluids from the tissues into the wound, reduces the oedema and leads to a cessation of pain. The solution is suitable for immediate use (after surgical débridement); it is applied in the same manner as Dakin's solution. Pilcher has not only employed it on cases of gas gangrene, but found it exceedingly useful in the treatment of carbuncles, impetigo, and in all instances of cellulitis. There is no doubt that the solution has great antiseptic properties. Several preparations tested by us had a hydrogen-ion concentration of  $P_h$  2.0 to 2.2. When mixed with serum or blood the  $P_h$  changed to 4.0 to 4.2, which would indicate that even in the wound the solution produces a reaction which is not only inhibitive, but destructive for most of the anaerobes responsible for gas gangrene. Wolf and Harris,<sup>14</sup> as early as 1917, suggested the treatment of local anaerobic infections by means of acid solutions. The choice of hydrochloric and acetic acids as a part of the solutions is excellent. Some of our experiments on the influence of acids on anaerobes indicate that acetic acid has a specific action on the spores of most of the



pathogenic gas gangrene bacteria. Gram negative rods and cocci are readily inhibited and destroyed by the solution even in the presence of serum. In this respect the preparation is exceptionally pantherapeutic. The stimulation of the inflammatory processes is another significant property which cannot be underestimated. In fact, viewed critically from every aspect, Pilcher's solution appears as an excellent, inexpensive wound antiseptic which can be trusted, and if used early will probably prevent cases of gas gangrene with all their serious consequences.

#### SPECIFIC "VACCINE DRESSINGS" IN THE TREATMENT OF WOUNDS

The treatment of wounds by vaccine has been practiced with varying results. Since Bazy<sup>15</sup> has discussed this subject at length in a recent publication, readily accessible to every surgeon, a further consideration appears superfluous, and we will merely give an analysis of the specific "vaccine dressings," as proposed by Besredka<sup>16</sup> in 1924. In his studies on tissue immunity this French worker found that, among the various routes which he chose to inject guinea pigs with streptococcic and staphylococcic vaccines, the cutaneous application produced the most effective immunity. He reasoned that if this is the case the impregnation of the skin with vaccine-dressings should accomplish the same results. Subsequent laboratory and clinical tests proved his reasoning to be correct. Guinea pigs shaven on the abdomen and wrapped for twenty-four hours in dressings soaked with vaccines proved resistant to intracutaneous and subcutaneous injections of virulent staphylococci or streptococci. Although no local reactions were noticeable, the immunity was far greater than that provoked by the subcutaneous injection which caused considerable induration and general reaction. In order to render the vaccine more readily absorbable, Besredka replaced the heat-killed vaccines by cultures which were filtered on the seventh day of incubation through a Chamberland candle. These sterile filtrates contain a so-called "anti-virus" or inhibitive substance which arrests the growth of the micro-organisms and probably stimulates the development of a local immunity. These very interesting observations have been applied to the treatment of surgical infections. Besredka reports on the successful local vaccine therapy of cases of otitis externa, osteomyelitis, pleural fistulae, etc., while Bass, Soupault, and Brouet<sup>17</sup> treated, with gratifying results, approximately thirty cases of lymphangitis, deep and superficial wounds with fistular tracts, furuncles, abscesses, osteomyelitis, anthrax, etc.; vaccines, eight-days old cultures, filtered through candles and applied in form of dressings or instillation were employed. In a few instances intra-dermic deep injections were also practiced. A critical perusal of the case histories conveys the impression that this mode of treatment is harmless, but exceedingly beneficial. It certainly should be tried more extensively and the findings

reported at an early date, in order that it can be introduced into general surgical practice.

#### BIBLIOGRAPHY

1. Jour. Am. Med. Assn., 1922, 78, p. 1939.
2. Jour. Am. Med. Assn., 1924, 82, p. 1105.
3. Jour. Hyg., 1919, 18, p. 103.
4. Jour. Exp. Med., 1923, 37, p. 479.
5. See *Spiegel*, Veröffentlich. a. d. Krieger. u. Konstitution pathologie, 1923, 3, p. 5.
6. Lancet, 1917, 2, p. 925.
7. Proc. Soc. Exp. Biol. and Med., 1924, 21, p. 265.
8. Sacquépée, E. French research on gas gangrene, Lancet, 1920, 2, p. 605.
9. Centralbl. f. Chirurgie, 1924, 51, p. 8.
10. Klin. Wchnschr., 1924, 3, p. 257.
11. Thesis, Munich, 1911.
12. Jour. Path. and Bacteriol., 1919, 23, p. 50.
13. Ann. Surgery, 1925, 81, p. 198.
14. Biochem. Jour., 1917, 11, p. 213.
15. Surg., Gynec. and Ost., 1923, 37, p. 320.
16. Ann. d. l'Inst. Pasteur, 1924, 38, p. 565.
17. Presse Méd., 1924, 32, p. 48.

**Perineal Prostatectomy**—Twenty-five years of experience with perineal prostatectomy has convinced Parker Syme, New York (Journal A. M. A.), that it is the operation of choice rather than suprapubic prostatectomy. In his opinion, the two-stage operation should not be resorted to as a routine. It should be reserved for cases in which it is needed; and when it is employed, the bladder drainage should be through the perineum and not through a suprapubic cystostomy. Repeated blood examinations and kidney function tests should be made, and when the patient appears to be at his optimum, if his condition may be considered reasonably satisfactory, one can proceed with the prostatectomy with little anxiety; for median perineal prostatectomy, under sacral anesthesia, entails very little risk. Thoroughly satisfactory anesthesia can be produced in nearly 100 per cent of the cases by the simple injection of a proper solution of procaine into the sacral canal. If found necessary, parasacral injections can be supplemented. Syme makes a median perineal section, with vertical incisions through the prostatic sheath on either side, enucleating first one lobe and then the other. Hugh Young's tractor is used to bring the gland within easy reach and only a small perineal catheter is inserted, with a small loose packing in the prostate sheath. Bladder irrigation is scarcely ever done. The final functional results, as far as the bladder is concerned, Syme says are as good as those following suprapubic prostatectomy, if not better. As to convalescence, there can be no comparison, as to both brevity and comfort. Patients are out of bed within from twenty-four to forty-eight hours after operation; they have bladder control and are able to go about in comfort within a week.

**Publicity Shapes Public Opinion**—"There are few who will deny," says American Medicine editorially, "the truth of Terry's contention (CALIFORNIA AND WESTERN MEDICINE, November, 1925) when he says public opinion is the most potent force in putting 'over' or putting 'under' any movement. Public opinion cannot be reduced to charts, curves and cycles, but it can be fairly well gauged by a student of publicity who can diagnose its trends and who has newspaper experience in analyzing its growth, climax and decline, and can interpret the behavior of crowds. The most powerful molder of public opinion is publicity, and it can be made the strongest ally of scientific medicine. There is plenty of evidence that the misrepresentation and misinformation that is constantly being spread by anti-scientific groups in scores of magazines and hundreds of newspapers is undermining public confidence in scientific medicine. Busy doctors have been so preoccupied and so self-satisfied that they have overlooked the trouble-making possibilities of the cults and their growing capacity to handicap and hinder the practice and progress of medicine."

## CHANGES IN BLOOD SERUM CALCIUM FOLLOWING THE ADMINISTRATION OF PARATHYROID EXTRACT

By JAMES W. SHERRILL,\* M. D., AND E. F. F. COPP,\* M. D.

(From The Scripps' Metabolic Clinic, La Jolla, California)

**EDITORIAL NOTE**—*The important research by Doctors Sherrill and Copp of the Scripps Metabolic Clinic is so timely that the date of publication is advanced. The work was presented at the annual dinner of the San Diego County Medical Society December 9, 1925.*

THE recent announcement by Collip<sup>1 2 3</sup> of the extraction of a parathyroid hormone, which prevents parathyroid tetany and regulates the level of blood calcium, adds greatly to our knowledge of the glands of internal secretion. From experimental data thus far obtained, the extract is as specific in parathyroid insufficiency as insulin has proved to be in pancreatic insufficiency. Previous to the work of Collip, numerous reports of beneficial effects following the use of parathyroid extract have occurred in the literature, but with the exception of the work of Hanson<sup>4</sup> the majority are rather unconvincing. There is little doubt but that Hanson isolated the hormone and reported the method of preparation previous to the publications of Collip. However, not until recently<sup>5</sup> did he demonstrate the calcium regulating effect of the extract.

The discovery of the parathyroid glands belongs to Sandstrom (1880), although he did not describe the histological differences between the parathyroids and the thyroid. He believed that the small bodies which he noted were simply embryonic remnants of thyroid tissue. Gley, in 1891, rediscovered the parathyroids. He attributed death following thyroidectomy to the removal of the parathyroids, rather than to the removal of the thyroid tissue. As early as 1834 Raynard described early fatality coincident with the removal of the thyroid gland. Two Italian investigators, Vassle and Generali, in 1896 were the first to demonstrate the relation between the parathyroid glands and tetany.

Tetany may be described as a peculiar hyper-excitability of the nervous system (sensory, motor, autonomic). We are indebted to Clark and Kellie for the first clinical description of the condition. In 1815 they observed laryngospasm, rigidity of the extremities and tonic spasms in children, and other classical signs which occur in tetany. Similar clinical signs were described by Steinheim in 1831, and by Dance in 1831. Certain responses of the motor nerves are demonstrable by electrical and mechanical stimulation in tetany. Trousseau, in 1864, showed that the typical attitude of "obstetrical" hand occurred when a constricting band was applied about the upper arm to obstruct the flow of blood through the brachial artery. Chvostek showed that tapping the facial nerve caused contractions of the muscles of the corresponding side of the face, and Erb demonstrated increased electrical excitability of the motor nerves. The excitability can be determined, particularly with the kathodal opening contraction. In tetany contractions can be obtained upon application of currents below 5 milliamperes, whereas, in normal individuals much stronger currents are required.

The importance of mineral substances in tetany probably begins with the work of Sabbatini.<sup>6</sup> In 1901 he called attention to the antagonistic relation between calcium and sodium salts. When calcium solutions were applied to the surface of the brain electrical excitability was reduced; while sodium solutions had the reverse effect. He mentioned the fact that calcium preparations might be of value in epilepsy. Loeb,<sup>7</sup> in 1902, demonstrated that when solutions which precipitate calcium were injected into animals, thereby reducing the amount of available calcium present, marked hyper-excitability occurred. MacCallum and Voegtlin,<sup>8</sup> in 1909, demonstrated the existing relation between calcium and hyper-excitability of nervous tissue. The withdrawal of calcium caused hyper-excitability, which was relieved when calcium was supplied. They formulated the theory that tetany was due to calcium deficiency, and showed that injections of calcium relieved tetany in parathyroidectomized dogs.

Howland and Marriott<sup>9</sup> made determinations of serum calcium in normal children, rickets, idiopathic tetany, and convulsions. Sixteen normal children showed serum calcium values ranging from 9.2 to 11.2 milligrams per 100 cc., and twenty-one children with rickets from 8.8 to 10.7 milligrams per 100 cc., with a general average of 9.4. They showed rickets to be independent of tetany. Low calcium values were found in all cases of active tetany. In eighteen cases of idiopathic tetany the serum calcium ranged from 4.5 to 6.8, with a general average of 5.6. They did not find retention of inorganic phos-

\*James W. Sherrill (La Jolla, California), M. D., Johns Hopkins University. Practice limited to Diseases of Metabolism. Hospital connections: Director, Scripps Metabolic Clinic, La Jolla, California. Publications: "Chemical Studies of Edema," with F. M. Allen (Jr. Ass'n Amer. Phys. 1920); "Clinical Observations Concerning Progressiveness of Diabetes" (Jr. Metabolic Research, vol. 1, 5; 667, 1922); "The Diagnosis of Latent or Incipient Diabetes" (J. A. M. A., 77, 1779, Dec., 1921); "The Treatment of Combined Diabetes and Nephritis," with F. M. Allen (J. A. M. A., 75, 444, 1920); "Experiments on Carbohydrate Metabolism and Diabetes," with Henry J. John (Jour. Metab. Resch., 1, 109, 1920); "Clinical Observations on Treatment and Progress in Diabetes," James W. Sherrill and F. M. Allen (Jr. Metab. Resch., 2, 803, 1922); "The Influence of Carbohydrate and Protein on Diabetes and the Insulin Requirement" (Jour. Metab. Resch., 3, 13, 1923); "The Treatment of Arterial Hypertension," with Frederick M. Allen (Jour. Metab. Resch., 2, 429, 1922); "Progress of Potentially Diabetic Persons in Relation to Dietary Control" (Med. Clinics N. Amer., 6, 465, 1922); "Metabolic Observations in Psychiatric Conditions," James W. Sherrill (Jr. Metab. Resch., 5, 128, 1924).

\*E. F. F. Copp (La Jolla, California), M. B. from University of Toronto, 1923. Associated with Banting in early experiments with insulin; Christie Street Military Hospital, Toronto; with F. M. Allen one year. Practice limited to research and diseases of metabolism. Hospital connections: Scripps Metabolic Clinic. Appointments: Resident physician Scripps Metabolic Clinic. Publications: "Restoration of Hypodurally Degenerated Cells of the Pancreatic Islands in Dogs Under Insulin Treatment" (Journal of Metabolic Research, vol. 4, Nos. 3-4).



TABLE I

Thyroparathyroidectomized dog. Demonstrating fluctuations in blood serum calcium upon the withdrawal and the administration of parathyroid extract. This table also well illustrates the appearance of tetany co-incident with low blood serum calcium.

Sept.	Hour	Blood Serum Calcium	Red Cell Volume Per Cent	NaCl	Para-thyroid Extract Units	REMARKS
15	3:00 p. m. 4:00 p. m.	10.8	38.1	626		Before operation. Thyroparathyroidectomy.
16	6:00 p. m.					Good condition. Ate bread.
17	10:00 a. m. 2:00 p. m. 2:15 p. m. 4:10 p. m. 4:15 p. m. 4:20 p. m. 6:00 p. m. 7:00 p. m. 7:30 p. m. 8:00 p. m.	6.2     6.7   6.8	     38.5  43.6	     626 601	   10 10  5	Mild muscular contractions. Muscular spasm and convulsive seizures. Convulsive seizures increasing. Convulsive seizures typical of severe tetany. Laryngospasm. Spasm of diaphragmatic muscles. Dyspnoea. Unable to stand. Unable to stand.
18	10:00 a. m. 2:50 p. m. 4:00 p. m.	7.2	41.6	614	 7 3	No symptoms. No symptoms. Takes meat, bread, milk, but with difficulty in swallowing. Few twitches of abdominal muscles.
19	1:00 p. m.				5	Eats normally. No tetany.
20	8:45 a. m. 10:30 a. m. 11:15 a. m. 2:00 p. m.	6.1	37	610	  5	Few fine tremors, abdominal muscles. Good condition. Fed meat and bone.
21	10:00 a. m.					No tremors.
22	4:00 p. m. 4:30 p. m.				5	A few slight tremors. Given bread and butter.
23	9:00 a. m.	6.2			5	Normal.
24	9:30 a. m.				4	Chattering of teeth. Twitching of muscles of head and neck when stimulated or excited.
25	10:00 a. m. 10:00 a. m. 12:00 m.	5.5	33	593	  5	Tetany when cold or stimulated. Spastic gait. Tetany of right hind leg and jaw muscles.
26	9:00 a. m. 11:40 a. m. 8:30 p. m.	6.0			5	Few minor twitches. Tetany on exertion and when in cold draft. No symptoms.
27	9:00 a. m. 11:00 a. m. 7:00 p. m.				5 5	One slight shaking spell. Normal. Normal.
28	9:00 a. m. 12:30 p. m. 10:30 p. m.	16.8			10 10 10	No evidence of tetany.
29	3:00 p. m. 2:30 p. m. 6:30 p. m. 7:30 p. m.	13.8			10 10 10	No tetany. No tetany.
30	9:30 a. m. 10:30 a. m. 3:30 p. m. 7:30 p. m.	13.5	32.3	577	10 10 10	Refuses food.
Oct.						
1	1:00 a. m. 6:30 a. m. 12:00 m. 4:00 p. m.	17.6			10 10	Refuses food. Lacks usual vigor. Rather drowsy.
2	8:00 a. m. 7:00 p. m.	14.0				Dog is brighter. Eats and drinks fairly well. Lively, eats biscuits greedily.
3	8:30 a. m.	11.6				
4	9:00 a. m.	10.0				Dog is quite bright and eats well.
5	9:00 a. m.	10.0				Dog quite active.
6	9:00 a. m.	8.8				Acts normally.
7	9:00 a. m.	8.0				Shows no evidence of tetany.
8	9:00 a. m.	8.0				Eats and looks well.
9	9:00 a. m.	6.9				Normal.
10	9:00 a. m.	5.2				Chattering of teeth. Lack of usual co-ordination of muscles. Fell down on attempting to jump. Signs of tetany reappearing. Spasm of right hind leg muscles. Jaw muscles fibrillary twitching.
	3:00 p. m.					
	3:30 p. m. 6:30 p. m.				5 5	Muscle twitching worse. Will not eat.
11	9:30 a. m. 12:30 p. m. 7:05 p. m.	5.6			10	Has tetany in moderate degree. Clotting time of blood is five minutes. Particularly bad on awakening from several hours' nap. Muscular twitchings less marked. Ate large amount of food.

TABLE I—(Continued)

Oct.	Hour	Blood Serum Calcium	Red Cell Volume Per Cent	NaCl	Para-thyroid Extract Units	REMARKS
12	9:30 a. m.				5	Slight tremor. Good condition. Blood clotting time in capillary tube four to five minutes.
	10:00 a. m.	6.5				
13	9:45 a. m.	6.8			5	
14	9:45 a. m.	7.4			5	Dog appears normal.
15	9:00 a. m.	7.0				Slightly spastic in legs. Eats well and practically normal.
16	9:00 a. m.	6.2			5	More rigidity than yesterday.
17	9:00 a. m.	7.1				
18	9:00 a. m.	6.8				Temporal muscles twitching. Slight spastic gait.
19	10:00 a. m.	6.6				Chronic tetany.
20	9:00 a. m.	6.4				Slight spasticity of masseter muscles. Dog quite bright.
21	9:00 a. m.	6.0			10	Some spasticity of thigh muscles. Slight tremor of other muscles.
	2:00 p. m.					Tremors of muscles increased.
22	9:00 a. m.	5.8			10	Increased spasticity of all muscles.
	12:30 p. m.					Muscles of neck rigid. Swallows with difficulty.

phates associated with the low calcium values. Seven cases of convulsions not due to tetany, such as epilepsy, mental deficiency, etc., showed normal calcium of 9 to 11 milligrams per 100 cc.

Tetany occurs in several different types of clinical conditions, and can be produced by several measures. It is most commonly seen in association with rickets. The most classical signs are seen in idiopathic tetany, and in this condition the typically low serum calcium values are found. The administration of large amounts of sodium bicarbonate<sup>10</sup> has been known to produce attacks of tetany. Grant and Goldman<sup>11</sup> produced tetany experimentally in normal individuals by means of forced respiration. In twenty-one experiments the subject breathed as deeply as possible at the rate of fourteen times per minute. Symptoms of tetany developed in all the experiments in from 15 to 60 minutes, and the common signs, carpopedal spasm, Erb's, Chvostek's, and Trousseau's signs could be elicited in most of the cases. In one experiment a typical tetanic convulsion occurred. They explained tetany on the basis of alkalosis, produced by washing out carbon dioxide from the alveoli, thereby reducing the carbon dioxide content of the blood, so tending to make the blood alkaline. They did not study the changes in blood calcium to any extent. A number of investigators, particularly Patton, Findlay, and Burns,<sup>12</sup> in 1916 attributed the occurrence of tetany to the toxic effect of guanidine and methylguanidin. Although symptoms of tetany may be produced by injections of the salts of guanidin and methylguanidin, the position of these investigators seems untenable in the light of present knowledge of the disease, especially so, considering the researches to the contrary by Greenwald.<sup>13</sup>

Of all the chemical components of the blood, calcium is probably the most constant. Its level is little affected by the usual factors which frequently affect the other constituents, such as disease, rest, exercise, food, and diet. The normal blood serum calcium ranges from 9.4 to 10.4 mg. per 100 cc. In only one condition, viz., tetany, is it affected to any extent. From a number of reliable sources it has been re-

ported to be as low as 4.4 mg. per 100 cc. in this disease. For the analysis of calcium we have used the micro method of Kramer and Tisdall<sup>14</sup> without modification. The parathyroid hormone has a limited clinical application, because of the infrequent occurrence of diseases due to parathyroid insufficiency.

It is well known that the complete removal of all parathyroid tissue in dogs results in death within two to five days. Death is due to tetany, which begins gradually with hyper-excitability, muscular twitchings, fibrillary quivering, spasticity of the limbs, and finally leads to powerful clonic spasms and convulsions. In the late stages the laryngeal muscles and the muscles of deglutition are involved, and death finally results from respiratory failure. The administration of calcium salts affects, to some extent, the onset and progress. Serum calcium of dogs is distinctly higher than in the human. We consider 10 mg. to 12 mg. as normal.

The administration of calcium, either by mouth or intravenously, delays the onset of tetany in parathyroidectomized dogs, but they succumb after a short time. The injection of large amounts of fluid to promote diuresis also prevents the symptoms of tetany. Luckhardt and Rosenbloom<sup>15</sup> were able to keep parathyroidectomized dogs alive for four to six weeks, simply by injecting large amounts of saline intravenously every day. They injected 33 cc. per kilo body weight at each injection. Tetany appeared when the injections were discontinued. They found that it was not necessary to administer calcium, provided diuresis was kept up by water alone.

The effective action of the recently discovered parathyroid extract can be specifically demonstrated in thyroparathyroidectomized dogs. It controls tetany promptly and we have been able to keep parathyroidectomized dogs alive for over two months. Collip has kept several alive for over five months. A unit of extract is considered as 1/100 of the amount of material which will produce an increase of 5 mg. in the serum calcium of a dog weighing 20 kilos within a period of fifteen hours. The rapid recovery from tetanic convulsions following the ad-



TABLE II  
Hypercalcemia produced in a normal dog with overdoses of parathyroid extract.

Sept.	Hour	Calcium	Red Cell Volume Per Cent	NaCl	Para-thyroid Extract Units	REMARKS
26	9:00 a. m.	11.0	49	630	5	
	11:40 a. m.				5	
	8:30 p. m.	12.1			5	
27	11:00 a. m.	13.1			5	Normal.
28	9:00 a. m.	13.4			10	Normal.
	12:30 p. m.				10	
	6:00 p. m.				10	
	10:30 p. m.				10	
29	2:30 p. m.	19.2			10	
	3:00 p. m.				10	No appetite. Stupid.
	7:30 p. m.					
30	6:30 a. m.		47.1	532	10	No appetite.
	8:15 a. m.					Dog has vomited during night. Not nearly so lively.
	10:00 a. m.	19.0				
	10:30 a. m.				10	
	3:30 p. m.				10	
	4:15 p. m.					Dog attempts to vomit.
	7:00 p. m.					Vomits.
	7:30 p. m.				10	
Oct.						
1	1:00 a. m.				10	
	6:00 a. m.				10	
	12:00 m.	19.4	58			Vomited, stupid, not responsive.
	5:30 p. m.					Diarrhea. Hematemesis of 250 c.c. Refuses to eat. Very drowsy.
	9:00 p. m.					Restless, eyes dull, respiration quick and very audible. Keeps reclining position, whines.
2	8:00 a. m.					Died.

ministration of the extract is as remarkable as the recovery of a diabetic patient from deep coma following insulin therapy. We have seen many dogs in the severest forms of terminal convulsions restored to normal three to four hours after receiving the extract. The signs disappear in reverse order from that in which they appeared. We have not determined just how low the blood calcium may fall in terminal stages before reversible reaction is impossible. Reversible reaction is still possible with serum calcium values as low as 5.2 mg. per 100 cc.—the lowest figure we have yet encountered. It may be assumed that removal of the parathyroids lowers the threshold for calcium, and in this regard calcium is the only chemical element of the blood which is affected. We have not been able to detect changes in chloride, sugar, creatinine, urea or CO<sub>2</sub>; other than alterations due to fluctuations in blood concentration.

We are including in this publication only two charts, selected from a large number of experiments. These illustrate practically all of the cardinal changes following the use of parathyroid extract.

The relative constancy of the level of serum calcium at which signs of tetany appear, in the same dog as well as in the species as a whole, is very striking. When the level falls to 7 mg. per 100 cc. signs usually appear, and there is a progressive increase in the condition as lower levels are reached. Several dogs in which we failed to remove all the parathyroid tissue developed mild chronic tetany, resulting in minor signs, such as slight spastic gait, muscular twitchings, associated with constantly low serum calcium of 7 to 8 mg. per 100 cc. The manner in which tetany appeared when the calcium fell below 7 mg., and disappeared when increased above this figure, by means of the extract, is shown very distinctly in Table I. It is possible for animals to

be entirely symptom-free, with low values of 5.5 to 6 mg., but this is the exception rather than the rule. Occasionally, we have observed clinical signs after the calcium had been elevated to 9 mg. or more, but this is also unusual. The blood calcium changes only very slowly after extract is given. Clinical improvement may occur before there is appreciable change in the serum calcium, as shown in Table I. The dog had severe convulsions when the blood calcium was 6.2 mg. per 100 cc., and the administration of 25 units of extract restored the dog to normal within a period of four hours, but during this time the blood calcium was elevated only .6 mg.

Small divided doses of extract administered at frequent intervals are more beneficial in elevating the calcium than a single dose. Pyramiding doses at intervals of a few hours raises the calcium rapidly. This is shown very distinctly in Table II. It will be seen that the repeated administration of 5 units of parathyroid extract on September 26 and 27 in Dog No. 2 brought about a rapid increase, while in Dog No. 1, 5 units of extract daily on October 12, 13, and 14 brought about very little change. The duration of elevation depends on a number of factors, such as body weight, height of blood calcium at the time of injection and upon the dose of extract administered. Relation of the size of the dose injected to the body weight is more important than in the administration of insulin. For instance, we have seen 20 units of parathyroid extract raise the blood calcium of a baby, weighing 17 kilos from 12 mg. per 100 cc. to 15.5 mg. per 100 cc. within a period of eight hours, whereas the injection of a similar dose to an individual weighing 75 kilos increased the serum calcium from 10 mg. per 100 cc. to only 10.2 mg. per 100 cc. in a similar length of time.

Collip<sup>1</sup> described a condition of hypercalcemia

TABLE III

Changes in blood serum calcium, coagulation time and red cell volume in various types of clinical conditions.

Serum Calcium		Coagulation Time		Red Cell Volume		Para-Thyroid Extract Units	Time Days	Diagnosis
Before	After	Before	After	Before	After			
9.8	10.9	5	4	36	32.6	60	4	Arthritis
9.3	10.1	3	4	29.2	31.7	60	4	Arthritis
9.6	10.7	7½	3½	29.7		45	8	Arthritis
9.4	12					60	3	Arthritis
9.4	11.2	4	3	42	37.5	120	7	Paralysis agitans
10.6	12.8	5½	3½			50	6	Paralysis agitans
9.6	11.6					120	3	Paralysis agitans
9.2	11.8	7½	5	40	40	35	4	Hemophilia
9.2	10.4					100	3	Hemophilia
8.2	10.2	12½	5	47	44	70	5	Hemophilia
10.4	13.4					212	33	Mental deficiency with convulsions
10.8								Mental deficiency with convulsions
10.1	11.6					100	10	Epilepsy
9.7	11.7	4	3	25.6		45	8	Gastric ulcer
9.1	10.8	2	2	44.2		50	8	Neurosis
7.7								Purpura haemorrhagica
9.7		Average for 50 patients.						
11.2		Average for 40 dogs.						

following overdosage of parathyroid extract. It is a very simple matter to produce hyper-calcemia by overdosage, and in our clinical work we have been very cautious in its use. Definite symptoms follow overdosage in dogs. The earliest and most frequent finding is stupor. The dog becomes listless and makes very little effort to move or to notice his surroundings. Anorexia soon develops. They cannot be encouraged to take either food or water. As the calcium is further increased, vomiting occurs and is very persistent. If water or food is administered by mouth during this period, vomiting promptly ensues. Later, hematemesis and bloody diarrhea occur. If the extract is discontinued as soon as vomiting occurs, the dogs recover, but we have found no beneficial therapeutic measures after hematemesis begins and the animals die within a few hours. We have been able to produce hyper-calcemia in parathyroidectomized dogs as easily as in normal dogs. When large amounts of extract are given to produce hyper-calcemia the blood calcium can be increased to as much as 19 mg. per 100 cc. It seems that a plateau is reached when such concentration is produced, and further injections of large amounts of extract have not increased the blood calcium beyond this point. This is shown very distinctly in a normal dog (Table II) when repeated doses of the preparation were administered.

Changes in red cell volume have been small and irregular. We have not been able to associate definite changes with parathyroid extract; neither has the blood volume borne any relation to the concentration of the blood calcium. We have noticed marked increase in the red cell volume in terminal stages of tetany, but these must be attributed to water loss through dehydration. Increases in the red cell volume during hyper-calcemia have been due to water loss through vomiting.

The effect of various types of diet upon the production of tetany in parathyroidectomized dogs is a disputed question. Patton and Findlay<sup>12</sup> have supported the belief that meat-feeding induces attacks of tetany. Collip and Scott<sup>2</sup> have offered evidence to the contrary, and our investigations support the findings of the later observers.

The use of parathyroid extract will undoubtedly be of greatest value clinically in tetany, a condition which certainly cannot be classified as one of the common diseases. To date, the treatment of only

one clear-cut case of tetany, with the new extract, has been reported<sup>16</sup>: a case of chronic tetany following surgical operation for thyroidectomy. Low serum calcium values of 5 mg. per 100 cc. were reported, and there was immediate benefit following the use of extract. There were the usual elevations in blood calcium after administration of the extract. The principal object of this paper is for reporting change in the blood serum calcium. We have followed calcium changes in clinical conditions in which we thought calcium metabolism might be theoretically involved. Epilepsy and paralysis agitans deserved first consideration. Three cases of paralysis agitans were studied. Berkeley and Beebe<sup>17</sup> made a number of publications in which they reported benefit in paralysis agitans, following the use of parathyroid preparations. Their reports were rather vague. On account of the depressing effect of calcium upon nerve irritability, it was hoped that the elevation of blood calcium, by means of the extract, would serve to reduce tremor in paralysis agitans. In all of our work we have been handicapped for lack of extract, and we realize that therapeutic benefit might result from the use of larger doses. The material used in all of these experiments was sent to us for standardization, and the term units is only relative. In some of the earlier lots which we received we feel sure that the titre was considerably in excess of the theoretical amounts, as described by Collip. One of the three cases observed improved slightly, but in the other two no benefit whatever was noted. In the improved case muscle co-ordination was better, and he gained several pounds in body weight. The psychic state must, of course, be taken into consideration. In all three cases, blood calcium was elevated several milligrams, as shown in Table III.

Hemophilia is one condition which especially deserves thorough study, on account of the importance of calcium in blood coagulation. It is well known that in the absence of calcium blood will not clot. In hyper-calcemia in animals blood coagulates very quickly, and frequently it is almost impossible to obtain blood from the animals. This is due, in some measure, to the increase in the red cell volume. We have noticed decrease in coagulation time in two cases of hemophilia. In one instance it was decreased from 12½ to 5 minutes after the administration of 70 units of parathyroid extract over a period of five days. In the second case clotting was reduced



from 7½ to 5 minutes after injecting 35 units. In the three cases of hemophilia, decidedly low calcium values were found. Hypocalcemia has been reported in certain types of hemophilia,<sup>18</sup> with decrease in coagulation time after calcium administration. The changes in coagulation time are in all probability due to actual increase in the circulating calcium, rather than to utilization.

The blood calcium changes in several cases of mental deficiency were studied. One patient, a child of 2½ years, received 242 units of parathyroid extract over a period of thirty-three days. Ten units of extract twice daily for four days was sufficient to elevate the serum calcium from 10.2 mg. to 15.4 mg. We continued to administer the extract in sufficient quantities to keep the serum calcium elevated to 12-14 mg. The child seemed depressed, and there was better muscle co-ordination during periods of hypercalcemia; also, there was freedom from convulsions when the serum calcium was kept high. The slight benefit in this case was probably due to the decreased excitability incident to hypercalcemia. In the other cases of mental deficiency no clinical changes were noted. Clinical results in epilepsy have also been negative.

#### BIBLIOGRAPHY

1. Collip, J. B.: Jr. Biol. Chem., 63, 1925, 393.
2. Collip, J. B.; Clark, E. P., and Scott, J. W., Jr. Biol. Chem., 63, 1925, 439.
3. Collip, J. B., and Clark, E. P.; Jr. Biol. Chem., 64, 1925, 485.
4. Hanson, Adolph M.: Military Surgeon, March, April, 1923; January, February, December, 1924.
5. Hanson, Adolph M.: Minnesota Medicine, May, 1925, 283-285.
6. Sabbatini, L.: Riv. Sper. Di fren., Reggio, 1901, xxvii, 946.
7. Loeb, Jacques: Amer. Jr. Physiol., 1901, v, 362-373.
8. MacCallum, W. G., and Voegtlein, C.; Jr. Expr. Med., 1909, 11, 118-151.
9. Marriott, W. M. and Howland, J.: Johns Hopk. Bull. 1918, xxix, 235.
10. Howland, John, and Marriott, W. M.: Q. Jr. Med., 1918, 11, 289.
11. Grant, S. B., and Goldman, A.: Am. Jr. Physiol., 1920, 52, 209.
12. Patton, D. N., and Collaborators: Q. Jr. Expr. Physiol., 1916, 10, 377.
13. Greenwald, Isidor: Jr. Biol. Chem., 1924, 59, 329.
14. Kramer, B., and Tisdall, F. F.: Jr. Biol. Chem., 1921, 48, 223.
15. Luckhart, A. B., and Rosenbloom, P. J.: Proc. Soc. Biol. & Med., 1921-22, xix, 129.
16. Snell, A. M., J. A. M. A., 85, 1925, 1632.
17. Berkeley, W. N., and Beebe, S. P.: N. Y. Medical Record, 1916, 90, 105.
18. Hess, A. F.; J. Hopkins Bull., 1915, 26, 372.

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## REPORT OF FIFTY CASES OF DIABETES TREATED WITH INSULIN

By BEN E. GRANT,\* M. D., Los Angeles  
(From the Department of Medicine, College of Medical Evangelists and White Memorial Hospital, Los Angeles)

*In the records of these fifty patients, we found that, with few exceptions, the dietetic regime was being adhered to very religiously. There was very seldom a digestive complaint except a tendency to constipation, no doubt partially due, in some cases, to the excessive bulk found in a diabetic's diet.*

DISCUSSION by Bernard Smith, Los Angeles; James W. Sherrill, La Jolla; W. D. Sansum, Santa Barbara.

THE object of this paper is to give some idea of the class of people, the symptoms, the complications, the results obtained, and the present status of the first fifty diabetics treated with insulin at the White Memorial Hospital from May 21, 1923, to July 6, 1924.

The average stay in the hospital was two weeks. Of the fifty patients under consideration, twelve were Jews. Among the diabetic patients entering more recently, there has been a still larger percentage of Jews.

The youngest patient in this list was 10 years old; the oldest, 75. The average age of the group was 52 years. Thirty were women, twenty were men. Six were standardized and sent home on a maintenance diet, without insulin. I mean by this that they were checked carefully as to tolerance for glucose by daily urine tests, careful diet restrictions, etc., and found able to handle a maintenance diet, without insulin. The rest were given insulin in order that they might have a maintenance diet. The maintenance diet given depended entirely upon age, sex, weight, and occupation of the individual. The average number of calories for men was about 2500; and for women, about 1800 calories for twenty-four hours. This is the amount of food they were finally sent home on. Each patient was given instruction on food values; was instructed how to cook; how to select foods, and how to weigh his meals. He was furnished a pair of scales that he might be accurate. Instructions were also given in regard to hypodermic injection of insulin at home, and the dangers of overdosing.

As is well known, the prominent symptoms of diabetes are loss of weight and strength, emaciation, excessive thirst, increased appetite, increased output of urine, nervousness, irritability, skin lesions (such as boils, carbuncles, itching, and eczema) and sometimes eye symptoms and neuritis.

It is of interest to compare a summary of the complaints of this group with these classical symptoms. Thirty-three complained of loss of weight and strength and of emaciation in varying degrees. Thirty-seven complained of excessive hunger and thirst in more or less severity. Eighteen complained

"Public Health," says the editor, Ohio State Medical Journal, "is firmly and permanently established as a principle; but we would be worse than foolish to assume that anything and everything masquerading under that banner had taken on virtue and value by merely assuming the 'name.' Commercialized fads and frauds, so-called health-by-mail agencies, self-seeking advertising clinics and 'services,' expensive and impractical socialized schemes, are all exploiting the public health idea."

\*Ben E. Grant (312 North Boyle Avenue, Los Angeles), received his M.D. degree from the College of Medical Evangelists, Loma Linda and Los Angeles. He is Assistant Professor of Medicine, College of Medical Evangelists; chief resident in Medicine, White Memorial Hospital; medical consultant, Los Angeles Police and Fire Departments; on the staff of the Los Angeles General Hospital, Glendale Sanitarium and White Memorial Hospital. Previous publications include: "Diabetes Mellitus (Better Health Magazine). Doctor Grant limits his practice to Internal Medicine.

of skin lesions, such as dry scaly skin, boils, carbuncles, and gangrenous processes. Thirty-six complained of nervous symptoms, such as insomnia, dizzy spells, headache, crossness, irritability, burning sensations, and paresthesia. Thirty-seven complained of frequent urination, with increased output of urine. Four complained of disturbance of vision and partial blindness. Others had poor vision, and still others only fair vision. Only five gave a history of diabetic parentage. Five others had either brothers or sisters who had died with diabetes or had it at the present time.

The length of time patients had known they had diabetes varied from twenty-two years to three weeks. The average was about two years.

The highest blood pressure found was 270 systolic, 130 diastolic. The lowest blood pressure was 90 systolic, 55 diastolic. The average of the entire group was 150 systolic, 84 diastolic.

The urinary findings were variable. The highest twenty-four-hour output was in no case in excess of 5000 cc. The highest specific gravity was 1.039. The lowest was 1.004. The Ph. value, without exception, was 7 or below, with a tendency to rise as the diet was standardized and the patient put on a more alkalinizing diet.

The highest sugar percentage found in urine was 11.17 per cent. With this we had correspondingly 333.3 mgm. blood sugar. The largest amount of sugar eliminated in the urine in twenty-four hours was 99.6 gms. The urine in this case had a sugar percentage of 8.3 per cent, and the blood sugar was 168 mgm. This particular case presented many untoward symptoms of diabetes, including loss of weight, excessive hunger, excessive thirst, eye symptoms, and skin symptoms.

Five patients had high blood sugar, and at the same time had a negative sugar in the urine, determined by the usual Benedict method. They were as follows: 285.7 mgm.; 240.9 mgm.; 200 mgm.; 250 mgm.; 193 mgm. This apparent high kidney threshold is not out of the ordinary, and has been a more or less frequent occurrence in this group. Whether it is due to a tolerance of the kidney, built up over a long period of time, or due to fatigue and disease of the kidney, I am not prepared to say. Normal kidney threshold is from 180 mgm. to 200 mgm. This condition was found chiefly in the chronic cases and in the elderly type of diabetics.

The lowest blood sugar of this group was 161.3 mgm. The highest was 666.6 mgm. The average was 260.7. There may be some question about the treatment of a case of diabetes with as low a blood sugar as 161.3, but this patient had many untoward symptoms of diabetes, including skin and eye complaints, loss of weight, etc. She had been starving herself, also, for some time prior to the test. That is perhaps why we got such a low reading on her blood sugar report.

The patient with the 666.6 mgm. report was one referred to us in a supposed diabetic coma. She was in coma, and she was also a diabetic; but she was not in coma from diabetes. She had uremia as a complication, and the accumulation of waste products was accountable for the apparent high blood sugar report on her blood. There may be a question

as to the grounds for holding that this was not diabetic coma. There was no acetone or diacetic acid in the urine; and there was no response to a maximum dose of insulin—a dose even above our regular coma program.

Two of the entire group were in coma—the one just mentioned, complicated with uremia; and the other a purely diabetic coma case with pneumonia as a complication. Both of them died.

Five patients had gangrenous processes in varying degrees of severity. Two of these required amputation of the limbs involved. One of these patients waited too long before consenting to the amputation, and the toxicity was so great that she seemed unable to regain her strength, in spite of the fact that her blood sugar and urine sugar were within the normal limit for days and days preceding and following the operation.

The other amputation patient progressed nicely, following the operation. The stump healed well and he returned home. Just recently (one year since amputation) we received information that from some inter-current infection he passed away. Perhaps if the truth were known, we would find that there had been some neglect in the program, thus increasing the sugar in the blood and in the urine and lowering the resistance.

The remaining three patients with gangrenous processes healed, and are entirely free from symptoms.

Two patients had large carbuncles. One healed without surgery, merely by reducing the blood sugar and the urine sugar, with diet and insulin. The other patient had already been operated upon and was draining profusely when we first saw the case. Of the two cases, the one operated upon took longer to heal (three months altogether). The one without surgery healed in three weeks' time.

Of the entire group, nine died with the following complications as the apparent cause of death: (1) pneumonia; (2) uremia; (3) rupture of left ventricle of heart (proved by autopsy); (4) septicemia; (5) syphilis; (6) myocarditis and nephritis; (7) cause unknown; (8) diabetic coma (relatives refused insulin treatment); (9) diabetic coma (would not take her insulin nor watch her diet. Died in a community where no one knew how to use insulin).

Of this number, four died in this hospital. The others died in their homes or at other hospitals.

Two patients had syphilis. To our minds, this is one of the most serious complications, because, unless anti-luetic treatment is pushed to the limit, insulin has very little action, and then only if very large doses are used. We consider the syphilitic diabetic the hardest case to treat, and also the one who has the poorest prognosis.

The patient who died from a ruptured left ventricle (proved by autopsy) had been on insulin treatment for several days. The blood pressure had been reduced from 220 systolic, 130 diastolic to 185 systolic, 105 diastolic. There was no evidence elsewhere of destructive changes in the heart muscle or vessels. We have observed slight changes and disturbances in the heart action after insulin treatment was started which were not present before. But we



are at a loss to know the cause. If it is insulin, what is the chemistry of its action?

Nephritic and cardiac complications, when present, were usually of long standing and accompanied by arteriosclerosis, especially in the older patients.

Results with this group have been fairly gratifying. The average length of time elapsed since treatment is about twelve months. By keeping in close touch with these people, we are able, even after they leave the hospital, to satisfactorily watch their progress. Frequently (every six months) every patient is requested to return to the hospital for urine and blood sugar determinations. On this program, we have received good co-operation. In case patients find it impossible to come to the hospital for these re-tests, they are requested to fill out a questionnaire which gives us the necessary information.

In the record of these fifty patients, we found that, with few exceptions, the dietetic regime was being adhered to very religiously. There was very seldom a digestive complaint, except a tendency to constipation, no doubt partially due in some cases to the excessive bulk found in a diabetic's diet. This has been controlled by petrolatum, oil-retention enemas, etc. The body weight has been maintained without exception. There were no skin lesions or other serious complications. A very large percentage were working, and all reported general good health. A few showed positive Benedict's reaction for sugar in the urine, and about the same number had a moderately increased blood sugar. With a very few it has been possible to reduce the insulin dosage.

One patient, a child of 10, returned to be standardized again. She confessed that she had eaten other things than her prescribed diet; and because of this, we found it necessary to confine her closely.

We have found it difficult to treat a diabetic who has received insulin previously—much more difficult than to treat one who has never before been treated. I have no explanation for this. Perhaps others have had the same experience.

The average assistance of insulin for twenty-four hours was variable, varying with the individuals and complications and according to the strength of the insulin. The diabetic patients treated in this hospital at the present time are using Eli Lilly's U. 40 strength. It is very uniform and reliable.

312 North Boyle Avenue.

#### DISCUSSION

BERTNARD SMITH, M. D. (1032 W. Eighteenth Street, Los Angeles)—Gangrene, as a complication in diabetes, may be extensive and be associated with but minor involvement of the blood vessels to the part. Where an ample blood supply is available the treatment of the gangrene may require no more surgical attention than what is needed to secure free and open drainage. Such drainage, together with a satisfactory control of the diabetes, permits a surprisingly rapid repair of the gangrenous tissues to take place. When there is extensive involvement of the blood vessels, such as extensive endarteritis or marked arteriosclerosis, the surgical management is to be guided by the degree of vascular deficiency, and not by any condition peculiar to diabetes. With the disturbance in carbohydrate metabolism under control by diet and insulin, the surgeon will work to better advantage if he will forget that the patient is diabetic.

Doctor Grant shows, in his two cases of carbuncle complicating diabetes, the wisdom of instituting diabetic treatment early. The diabetic patient has a lowered re-

sistance to infection and any surgical measures attempted before the faulty body chemistry has been corrected will only invite serious trouble. The difference between three weeks and three months, the healing time for the two cases cited, may be taken as a measure of the resistance power before and after diabetic treatment.

I am glad that Grant has emphasized the importance of the teaching and training service to patients. This is of great importance when insulin is not used. To all patients who require insulin such training is even more necessary. Satisfactory co-operation is never secured in any chronic disease unless it comes through an understanding on the part of the patient of the fundamental problems of the disease and its treatment. The intelligent co-operation thus secured is a safeguard to the patient at all times.

JAMES W. SHERRILL, M. D. (Scripps Metabolic Clinic, La Jolla, California)—Doctor Grant mentions a most unusual and highly interesting case, viz., one of coma with exceptional hyperglycemia of 666 mg. per 100 cc., with negative acetone and diacetic reactions in the urine. He does not state whether glycosuria was present. A record of the nitroprusside reaction and the CO<sub>2</sub> combining power in the plasma would be of interest. The association of marked hyperglycemia in terminal renal disease is not unusual, but the occurrence of extreme amounts as mentioned above is rare. The question as to whether the reducing substance in the blood of nephritic individuals is dextrose or not is still a disputed point among physiological chemists. The amount of titratable reducing substance in the blood depends upon the method used, and it has been found that lower readings are obtained with copper solutions than by the picric acid method. Nevertheless, the hyperglycemia encountered in renal disease is very frequently not affected by insulin, unless a complicating diabetic element is present. We recently studied the effect of insulin on the blood sugar of two nephritic patients in terminal stages of uremia. In the first, thirty-five units of insulin failed to reduce an existing hyperglycemia of 270 mg. per 100 cc., and in the second patient, 40 units of insulin only reduced the sugar from 297 mg. per 100 cc., to 268 mg. per 100 cc. within a period of one and one-half hours. In both cases the blood urea was more than 225 mg. per 100 cc. and glycosuria was absent. In such cases the reducing substance is most probably not dextrose. Feinblatt has recently reported a fatal case of "diabetic" coma in which the blood sugar exceeded 300 mg. per 100 cc., with negative acetone and diacetic reactions in the urine, and in which 112 units of insulin failed to lower the reducing substance in the blood. The occurrence of such cases is, indeed, rare. Since the advent of insulin and its more widespread and universal use, it has been recognized that its action is specific in all cases of diabetes mellitus. I have never seen a true case of diabetes in which insulin failed to act promptly with immediate lowering of blood sugar when sufficient amounts were given. Severe acidosis, accompanied by high blood sugar values, may occur in diabetic individuals without the presence of diacetic or beta oxybutyric acid in the urine. Such form of acidosis has recently been produced by Modern and Lundin upon feeding odd carbon fat. In such cases overwhelming amounts of organic acids, such as lactic, pyruvic and acrylic, are present, and insulin is without effect in reducing hyperglycemia.

Contrary to general belief, the death rate from diabetes in the United States since the introduction of insulin is very high, even in well-controlled series of cases as reported by some of our foremost specialists. The death rate from diabetes in New York City in 1915 was 2.18 per cent per 100,000, and in 1923 it was 2.5 per cent per 100,000. In Doctor Grant's series the death rate is 18 per cent, which is in keeping with the general average of cases reported.

W. D. SANSUM, M. D. (Santa Barbara Cottage Hospital, Santa Barbara, California)—Doctor Grant has reviewed a series of very typical cases of diabetes such as usually enter large city hospitals. His death rate emphasizes the fact that diabetes is a disease of serious complications, the most serious of which belong to the blood-vessel disease-group, for whereas but two died from their diabetes, three died because of heart and kidney complications. As statistics accumulate, there is additional proof

that all adult patients, who have had diabetes for a sufficient length of time, eventually develop, in addition, some form of blood-vessel disease. Some men maintain that this is due to the abnormally high fat of the diabetic diet. Apparently, in the test-tube, as Shaffer has shown, one gram of carbohydrate will burn two grams of fat, but, as Bloor has shown, this ratio does not hold in the body. I believe that not more than one gram of fat should be included in the diabetic diet for each gram of carbohydrate. In addition, it seems to me that the blood-vessel disease might also be due to the excessive acid-ash in a typical diabetic diet due to the use of meat, eggs and bran breads and the limitation of such alkaline-ash foods as fruits and milk. The use of higher carbohydrate diets, in the treatment of diabetes, should obviate the necessity of such acid diets. I am, therefore, advising all patients who cannot take fairly normal diets, even though they can remain sugar-free on a typical diabetic diet, to take sufficient insulin to carry a fairly normal diet.

DOCTOR GRANT (closing)—It is a surprise to many of us, and indeed a disappointment, that, notwithstanding, the success of the insulin treatment, we have not been able to reduce the mortality according to the statistics alluded to in the discussion or other statistics as well.

Doctor Sansum has called our attention to the fact that the death of a large percentage of diabetics is caused by blood-vessel disease, which has evidently been caused by diabetes. This would suggest, at least, that we ought to use more care in treating diabetes when the disease is in an incipient stage.

In the case mentioned by Doctor Sherrill, the urine sugar was 2.4 per cent in the only specimen we were able to obtain, and that was a catheterized one. It is to be regretted that we are unable to give the sodium nitroprusside and the CO<sub>2</sub> combining power tests of this patient, but she was under observation such a short time before her death that we were unable to give as full a study as we should like to have given. The method in determining all our blood sugar is the Folin and Wu method.

## CHRONIC ULCERATIVE COLITIS

By M. S. WOOLF,\* M. D., San Francisco

*Review from selected literature.*

*Report of a case.*

*Discussed by William Ophuls, San Francisco; J. H. Woolsey, San Francisco; Stanley Stillman, San Francisco; Alfred C. Reed, San Francisco.*

SIR WILLIAM HALE WHITE gave, in 1888, the first description of chronic ulcerative colitis as a medical entity. In 1923, Sir Humphry Rolleston and Logan well summarized our knowledge of this disease from the medical and surgical standpoints, respectively. In the thirty-five years which intervene between Hale White's first discussion of ulcerative colitis and today, the cause of the disease has neither been discovered, nor has a great deal been done for the amelioration of it. It is, however, probably recognized that it is a surgical complaint, in the sense that the only help for the patient is an

early opening into the bowel, for the purpose of easing the diseased area of its irritation. Irrigation of the colon from above is the accepted therapy. Although Einhorn is suggesting a non-operative method by using an intestinal tube through the mouth, it has been tried only a short time and has not supplanted surgical methods.

Ulcerative colitis is acute or chronic. We refer to the chronic form when we speak of "ulcerative colitis." We may, and often do, find the causative organisms in acute ulcerative colitis, which may appear in the stool in an almost pure culture. Such organisms are the streptococcus, the pneumococcus, and the organism of tropical dysentery. These may fade in their significance, later being replaced by organisms usually normal to the bowel as secondary invaders. They may give no clue to the original infection. The chronic ulcerative colitis of Hale White is a condition mainly of the large bowel, the causative organism of which is entirely unknown. It is not due to any known cause, such as diverticulitis, obstruction with stercoral ulceration, fevers, as typhoid fever and tuberculosis, or to the dysenteries—bacillary or amebic. Nor does it follow destructive lesions from without, neighboring infections of the appendix, duodenum or stomach. It is not due, as far as is known, to a chemical poison in the system, such as mercury or arsenic. Rolleston compares it with bronchitis, in that all the symptoms and serious consequences are not due to the factors causing the original disturbance, but to secondary changes, both pathological and bacteriological. McCarrison suggests that it is a deficiency disease. Whether that is so or not, when ulceration is present, supplying the deficient elements will scarcely save the patient.

Clinically, ulcerative colitis is a disease with remissions. There may be months or years between the attacks which consist of cramps, tenesmus, and diarrhea. This is, most often, spurious in type and amounts to four to twenty stools a day, mucus and blood being the predominant constituents. Little weight is lost almost to the terminal attack, except where the small intestine is affected, which interferes with absorption. But there is secondary anemia. Practically all the cases in the University of California had pyorrhea.

Though not a rare disease, chronic ulcerative colitis is not common. In 1913 to 1921, the University of California Hospital had in its wards but nine definite cases. All had mucus and blood in the stools and all had ulceration of the rectum, and in none could a causative organism be stated.

The lower colon appears always to be affected. Logan says the affection commences in the rectum, and normal mucous membrane may sometimes be seen above an ulcerated area. The oldest lesions, therefore are found lowest in the colon. This fact aids us in diagnosis, for through the sigmoidoscope this part of the bowel may be examined. Most writers, including Hale White, have asserted that stricture does not occur in this disease, but Logan has offered good evidence from x-ray findings that it does. Other interesting points brought out by Logan are that there is a mortality in untreated cases of 78 per cent; a 7.5 per cent mortality occurs while patients are undergoing medical treatment,

\*Montague Sydney Woolf (240 Stockton Street, San Francisco), M. D. Royal College Physicians and Surgeons (England). Other degrees and honors: Master of Arts (modern foreign languages), Birmingham University (England), 1907; Bachelor of Science (Anatomy and Anthropology), Birmingham University (England), 1912. Awarded silver medal (Pathology) University College, London, 1913. Liston gold medal (Clinical Surgery), University College, London, 1914. Practice limited to Surgery. Hospital connections: University of California Hospital and Children's Hospital, San Francisco. Appointments: Instructor of Surgery, University of California Medical School. Publications: Text-book, *Principles of Surgery for Nurses* (W. B. Saunders & Co., 1925); *A Case of Tetanus Illustrating Modern Methods of Treatment* (J. A. M. A., 1919); *Cancer of the Rectum* (California and Western Medicine, 1924); *The Training of Medical Students* (J. A. M. A., 1924); *Leuconychia Striata* (Archives of Dermatology and Syphilology, 1925).



and a mortality of 27.5 per cent results from operation. It is, as Lockhart Mummery says, more serious than acute appendicitis and, therefore, immediate operation is likewise a proper course in the treatment. This consists of washing out the bowel, the simplest way being through an appendicostomy. This, however, though it cleanses and certainly lessens irritation, does not prevent the feces from passing over the damaged surface, so that others have performed ileostomy and caecostomy, whereby the colon is unloaded at its beginning. Stone has blocked the path to the colon by severing the ileum, invaginating the severed ends and suturing these together again, end to end, so that a double diaphragm separates the distal from the proximal loop. Finally, he opens the proximal loop on the abdominal wall, so that fecal contents may drain away. The colon is irrigated by a separate appendicostomy. This irrigation may be continuous. It seems not to matter essentially which antiseptic one uses, and normal saline solution is efficient for the lavage. Recently, iodine has been given by mouth as the tincture in 10 minim doses, with some success.

The ulceration, as seen by the sigmoidoscope, varies from small discrete ulcers with hyperemic edges to a complete destruction of the mucous membrane, so that there is seen nothing but an edematous, bloody and discharging tube in which the normal loose folds have disappeared. The discrete ulcers may be so deep that the mucous membrane in the intervals between them appears to surmount raised spots. The surface then resembles groups of papillae. Usually, the examination can be made without great distress to the patient, although the presence of the instrument often causes abdominal pains and a straining of the lower bowel. The diffuse denudation of the wall differs from that of a proctitis of local specific origin which is usually limited to the lower part, the upper part being free of any pathological appearance. In proctitis, also, pain and tenesmus on examination is very much more severe.

Ulcerative colitis is a disease of late adolescence and of middle age. It appears hardly to affect children or the aged. Very often the disease is heralded by nausea, vomiting, and cramps in the abdomen. These symptoms are followed by diarrhea, which is very marked and accompanied always by the passing of blood and mucus. There may be, as has been mentioned, from four to twenty or more stools in the twenty-four hours, and often the night is as much interrupted by the diarrhea as the day. The abdomen is not rigid, but is tender either in the lower half or, commonly, over the sigmoid only. Some part of the colon may sometimes be distinctly palpated. Not infrequently the patient has arthritic pains. Finally, the patient succumbs to a combination of factors, namely, fatty degeneration and cloudy swelling of the organs, secondary anemia, and shock from perforation. Perforation, according to Mummery, occurs in 15 per cent of cases, but peritonitis is either low-grade in type or absent, the peritoneum apparently having acquired an immunity to the secondary organisms then present. At autopsy involvement of the mesenteric glands is not usually observed.

Many of the above points are brought out in a

case, which reported to the Surgical Out-Patient Department of the University of California Hospital, where a sigmoidoscopic examination showed destruction of the mucous membrane below, discrete and punched-out ulcerations in the upper part of the rectum. The largest ulcers were only one to two centimeters in diameter. The man was transferred to the San Francisco County Hospital, where it was expected an opening into the bowel would be made. He died, however, before this was done.

The complete history of this patient is as follows:

The patient was an Englishman, age 48 years, who came to the surgical out-patient department of the University of California Hospital October 3, 1923, complaining of diarrhea and pain in the shoulders.

Family History: Negative. P. H.: Born in England. Lived there until 18. In Canada, 18 to 24. New York State, 24 to 27. California, 27 to 48. Occupation: Farmer in Canada. Gardener in New York. Hotel clerk and bell boy in California. Diseases: Measles in childhood. Diphtheria while in Canada. Yearly attacks of gripe. Venereal: Neisser at the age of 24. Chancre at 33. Had anti-luetic treatment. Habits: Negative. P. I.: First attack was twenty-two years ago while he was working as a gardener in Rochester, New York. Had diarrhea with mucus and blood in stools. Was treated at the Homeopathic Hospital for eleven weeks, with no relief. The second attack was seventeen years ago. This was similar to the first attack. He was treated at the St. Francis Hospital, San Francisco, for five weeks. The third attack was twelve years ago. He was treated at the Lane Hospital, San Francisco, and had turpentine and silver nitrate injections into the colon. The fourth attack was two years ago. Was again treated at Lane Hospital.

The present attack began September 10, 1923, with diarrhea (12 to 24 stools per day). At first the stools were watery and mucoid; later they became blood-tinged. Scybulous fecal masses were passed at times. No colic, griping pains or tenesmus. Recently, he had slight tenderness in the left flank, tenesmus and involuntary stools. There was no fever and no noticeable loss of weight. For one year the patient had complained of "neuritis" in both shoulders. These pains were shooting in character, and worse at night. He had difficulty in sleeping. Massage, sweats, and bakes were tried, without relief. Finally, the patient consulted Doctor Albert Abrams, who told him that the seat of his trouble was in the spleen and spine. For this he was given fourteen treatments. He became worse under these treatments, and came to the Surgical Out-Patient Clinic at the University of California Hospital October 3, 1923.

Physical Examination—The patient was an obese, anemic-looking man with flabby muscles. The teeth were in poor condition. Pyorrhea, alveolar gingivitis, and caries were marked. The tonsils were hypertrophied and cryptic. Heart and lungs were negative. Abdomen was negative, except for tenderness in the left flank on deep palpation. There was pain between the shoulders when patient moved his arms. Sigmoidoscopic examination showed involvement of the mucous membrane from the anal canal to the sigmoid, as far as one could see. The lower rectum showed more extensive involvement than the upper part. There was marked destruction of mucous membrane, with a raw surface which bled easily. In the sigmoid, small, isolated ulcers could be seen. The patient was referred to the San Francisco Hospital, and entered October 10, 1923. Numerous stools examined for amebae were negative. Stool cultures were negative for typhoid and dysentery organisms. The urine showed a small trace of albumen, a few hyaline and granular casts, and a small number of red blood cells and pus cells. The blood count showed Hb., 85 per cent; r. b. c., 5,200,000; w. b. c., 12,200, and a normal differential count. On October 24, the white blood cells had increased to 37,700. The frequent mucoid and bloody stools continued during his stay in the hospital despite medical treatment. The patient developed great weakness and perspired freely. The pulse was 160, and feeble. Respirations, 40. Temperature, 94 degrees. Marked abdominal distension. He died at 2 a. m. October 25, 1923.

Autopsy was performed by Doctor Curtis E. Smith. Findings as follows: Purulent bronchitis and early bronchopneumonia of both lungs. Liver showed fatty infiltration and cloudy swelling. In the spleen there was a subacute pulp reaction. The stomach and small intestine were greatly distended with fluid material, and showed paralytic ileus. The omentum was adherent to the anterior surface of the transverse colon. In this region a perforation, two centimeters in diameter, was found in the colon. There was no peritonitis, and no free fluid in the abdomen. The rectum and descending colon had been almost entirely denuded of mucosa. Only a few small tabs of mucosa remained, and on the raw surface striations of the circular muscle were seen. In the transverse and descending colon there were numerous ulcers, varying in size from a millimeter up to ten centimeters in their greatest diameter. The more recent ulcers had slightly overhanging edges and were sharply defined, but many irregular areas of ulceration, with the mucosa hanging in shreds, were also found. Some of the larger ulcers were on the verge of perforation. The entire wall of the colon was contracted and very friable. The mucous membrane of the small intestine was normal. The appendix was small and cord-like. There was moderate hyperplasia of the mesenteric lymph nodes. No thrombi were found in the mesenteric or portal veins.

Anatomical Diagnosis—Chronic ulcerative colitis. Large perforating ulcer of the transverse colon, without peritonitis. Paralytic ileus. Terminal bronchopneumonia. Calcified tubercles in the lungs and spleen. Moderate anthracosis of lungs. Cloudy swelling of the viscera. Fatty infiltration of the liver. Obesity. Microscopic examination of the colon: The mucosa, where present, showed marked dilatation of the blood vessels and lymphocytic infiltration. The submucosa and muscularis showed extensive infiltration of lymphocytes and plasma cells. In some sections this infiltration was found extending to the fat on the wall of the colon. No amebae were found.

240 Stockton Street.

#### DISCUSSION

WILLIAM OPHULS, M.D. (Stanford University Medical School, San Francisco)—I have read Doctor Woolf's paper with the greatest interest, especially since we also have observed, in the course of time, several cases which seemed to fall under this head. Before placing a case into this group, the more specific types of infection, such as amebic dysentery, tuberculosis, and syphilis, should be carefully excluded. If this is done there remain a certain, but not very large, number of observations which correspond clinically and anatomically to the picture drawn by Woolf in his paper. My impression has been that in the etiology of these conditions the streptococci played an important role. They can usually be found in considerable numbers in scrapings from the ulcers. In microscopical sections, also, they seem to be rather intimately associated with the lesions.

J. H. WOOLSEY, M.D. (University of California Medical School, San Francisco)—Chronic ulcerative colitis is a serious affliction and demands early and persistent treatment. In addition to the clinical history, physical examination and sigmoidoscopic examination, the employment of the x-ray with barium will help to show the degree of bowel wall involvement by the presence or absence of the normal haustra. The experience of this clinic demonstrates that a deflection of the fecal stream from the diseased area is the only effective treatment. An ileostomy should be done as quickly and gently as possible, and the ileostomy preferably opened at the end of twenty-four to thirty-six hours, as these patients are most prone to surgical shock.

One patient has demonstrated that a re-establishment of the former intestinal continuity, even after two years of good health and disappearance of all signs and symptoms of ulceration, again induced the former ulcerative colitis. Irrigation or instillations by themselves are of no curative value. Permanent ileostomy is the best known treatment today.

STANLEY STILLMAN, M.D. (Stanford University Medical School, San Francisco)—Chronic ulcerative colitis is

a serious disease even under the most favorable conditions for treatment.

The diagnosis once established, medical treatment should be continued no longer than the patient responds favorably to it. This favorable response should also be prompt. Failure upon the part of the patient to improve promptly under medical treatment indicates the necessity of placing the large bowel completely at rest. This may only be accomplished satisfactorily by performing an ileostomy. Ileostomy, if performed early in the course of the disease, may be followed by healing of the large bowel, allowing closure of the ileostomy. If performed late the ileostomy must be permanent, as closure is sure to be followed by recurrence of symptoms.

ALFRED C. REED, M.D. (Stanford University Medical School, San Francisco)—In chronic ulcerative colitis we have another example of a definite clinical entity with a non-specific etiology. Certainly, many of these patients have had their groundwork laid in an earlier amebic colitis. Amebiasis can be contracted in California and almost anywhere in the United States. I have under care now a young man who developed amebiasis in the army in France. This was finally cured by appropriate treatment after he had suffered some four years of improper and insufficient treatment. During this time the foundation was laid for chronic ulcerative colitis. The amebic colitis merged clinically into chronic ulcerative colitis. Cure of the amebiasis did not influence the course of the latter. Ileostomy, however, gave immediate and great clinical improvement, and will undoubtedly result in cure. The difficult question is to decide when to reinstate the functional capacity of the colon. The longer and the more resistant the ulcerative colitis, the longer postponement is required of this reinstatement. Sometimes probably the permanent retention of the ileostomy is the only safe procedure. We find often that, with the cure or disappearance of the original cause of colitis, a secondary streptococcal infection seems associated with the chronic ulcerative colitis. It is always a matter of the utmost importance to exclude ameba or other parasite by really adequate examination before reaching a diagnosis of true chronic ulcerative colitis.

DOCTOR WOOLF (closing)—We are apparently agreed that after a short trial of medical measures for the relief of chronic ulcerative colitis, we must resort to surgery when that relief has not been forthcoming. After all, we can definitely say that an ileostomy, the most suitable of operations for this complaint, will definitely save the patient's life, lowering the mortality from about 80 to 30 per cent. Otherwise, our knowledge of this condition remains *in statu quo*.

**Neuro-Arthropathies of Peripheral Nerve Injury Origin**—The two cases reported by Herman B. Phillips and Charles Rosenheck, New York (*Journal A. M. A.*), involved the shoulder joint. One man carried lumber on his shoulder, the other coal and ice. The condition ordinarily occurs in laborers subjected to prolonged or repeated severe muscle strain or severe traumas to the joint, either by direct or by indirect violence. The condition develops very insidiously with moderate disability. Little, if any, pain is present. A progressive swelling of the joint ensues, which may attain considerable proportions. The disability that ultimately supervenes is apparently the result of the mechanical factors secondary to the marked periarticular swelling and disorganization of the joint. Pain may be entirely absent. The striking absence of pain and tenderness during manipulation of the joint serves to call attention to the neurogenic nature of the condition. The subsequent course cannot be stated definitely for the obvious reason that the first case has been under observation only two years, the second case one year. The patients at present are both doing hard work, and apart from the disability incidental to the mechanical disturbance previously mentioned, apparently suffer no discomfort. The treatment is essentially symptomatic. Physiotherapy immobilization and operations have been performed but without especial advantages or benefits. After the condition has reached a state of equilibrium, operative intervention for removal of joint bodies and possible joint reconstruction is indicated and should prove useful.



## LAMINECTOMY AND REMOVAL OF SPINAL CORD TUMORS UNDER LOCAL ANESTHESIA

By E. B. TOWNE,\* M. D., San Francisco

*Laminectomy can be painlessly carried out after infiltration with local anesthesia.*

*Exploration of all aspects of the cord, and removal of extramedullary tumors, are painless, provided that handling of the posterior columns and posterior nerve roots can be avoided.*

*Compression of the medulla or upper cervical cord, causing impaired function of the diaphragm, is a positive indication for the use of local anesthesia.*

*If visceral disease contra-indicates narcosis, exploration of the cord should be done under local, with the temporary addition of general anesthesia, if necessary, during manipulation of the cord.*

DISCUSSION by Walter F. Schaller, San Francisco; Carl W. Rand, Los Angeles; Howard C. Naffziger, San Francisco.

LOCAL is preferable to general anesthesia for operations on the scalp, skull, and brain, because hemorrhage from the vessels of the scalp is decreased, intradural tension is diminished, and prolonged operations are followed by little or no shock unless they are complicated by bleeding incidental to removal of a tumor. Craniotomies and osteoplastic explorations can be painlessly carried out without narcosis. I employ a general anesthetic for head cases only when the age or mentality of the patient contra-indicates the use of procain. Until the first patient described below came under observation, I saw no reason for using local anesthesia for exploration of the spinal cord, because hemorrhage is not troublesome, there is no problem of increased intradural pressure, and the cord, unlike the painless brain, is extremely sensitive. In this case respiratory embarrassment made local anesthesia imperative, and the result was so satisfactory that the procedure has been repeated on three other patients.

### CASE REPORTS

CASE 1—*Compression of medulla and upper cervical cord by meningeal tumor. Tetraplegia, hypoesthesia of entire spinal distribution, and paresis of diaphragm. Extirpation followed by complete recovery.*

Mr. J. V. B. (Disp. No. 116,360), a clerk aged 28 years, entered Lane Hospital on November 18, 1923.

History—In November, 1922, he began to suffer from pains which radiated from the back of neck to the right shoulder. This was followed by numbness in the posterior cervical and occipital regions. Paraesthesias and loss of strength in the right arm began in March, 1923, and soon involved the right leg and the left arm. Partial retention of urine was noted in June. After July, he was unable to walk or to use his fingers efficiently. In September he developed increasing respiratory difficulty.

Examination—The patient lay propped up in bed, entirely helpless. Respiration was thoracic in character, and

no movement of the diaphragm could be detected. Unfortunately, a fluoroscopic examination of the diaphragm was not done. All muscles except those of the face were spastic, and showed loss of power varying from complete paralysis of the muscles below the knees and of the small muscles of the hands, to marked weakness of the muscles of the neck, shoulders, and thorax. Voluntary motions were limited to slight, slow contractions of the neck, shoulder, and upper arm muscles. All tendon reflexes were hyperactive, abdominal reflexes were absent, and plantar reflexes were pathologic. Normal cutaneous sensibility was limited to the distribution of the fifth cranial nerve. The entire spinal distribution showed diminution of pain, touch and temperature perception, which was most marked in the first to fifth cervical areas. Joint and vibration sensations were impaired. Retention of urine required catheterization. All cranial nerves reacted normally.

Wassermann reactions on the blood and spinal fluid were negative. The spinal fluid was clear and colorless, had 3 leucocytes per cmm., and showed positive Nonne and Noguchi reactions. Roentgenograms of the foramen magnum and the cervical spine were negative.

Diagnosis—(Dr. Walter F. Schaller and Dr. Thomas G. Inman). Compression of the upper cervical cord.

Operation—December 1, 1923, at 8 a. m. Morphine gr. 1/6 was given hypodermically at 6:30, and repeated with atropin gr. 1/150 at 7:30. The patient was in prone position, with his forehead resting on a crutch and his shoulders supported by sand-bags. His respiration was very labored in this position. The soft parts were infiltrated through punctures 5.0 cm. to either side of midline. Injections were made into the periosteum of the occipital bone and of the second to fifth cervical laminae, avoiding any deep infiltration, except when the needle was in contact with bone. One hundred and twenty cc. of 0.5 per cent procain, containing ten drops of 1/1000 adrenin, were used. The soft parts were cleared from the occipital bone and the upper five cervical laminae. The first, second, and third laminae were removed, and the dura was incised. The lower surface of a nodular, encapsulated tumor, attached to the dura under the posterior margin of the foramen magnum, presented at the upper end of the incision. After cutting around the dural attachment, the tumor was lifted out of a deep depression in the posterior aspect of the medulla and cord. Immediately after the removal of the tumor the patient began to breathe more easily, and during closure of the wound he talked freely. He suffered no pain during the operation, and left the table with a pulse of 80.

The tumor (Figure 1) weighed 9 gm. and measured 2.7 by 2.5 cm. Microscopic examination showed it to be a meningeal tumor (dural endothelioma or arachnoid fibrosarcoma).

Post-operative Course—The wound healed cleanly. After two catheterizations he regained control of the bladder. On the first day, abdominal palpation showed that the diaphragm was functioning. On the sixth day, he was able to move the arms and legs freely. On the tenth day, spasticity was greatly diminished, tendon reflexes were less active, and hypoesthesia could be demonstrated only below the waist. On the twenty-fifth day he began to walk with a spastic and ataxic gait. On the thirty-fourth day, when he left hospital, the dynamometer readings were right 35, left 45; sensation was normal except in the hands; and tendon reflexes were only slightly hyperactive. March 17, 1924, he considered himself entirely well, and went to work as a bank clerk. In November, 1924, beyond some restriction of the motions of the upper cervical spine, nothing abnormal could be found.

CASE 2—*Compression of dorsal cord by intra and extradural fibroma. Paraplegia and hypoesthesia. Extirpation followed by complete recovery.*

Mr. E. S. (Disp. No. 122,853), a railroad laborer aged 25 years, entered Lane Hospital December 3, 1923, recommended by Dr. C. G. Scaparoni of San Francisco.

History—Periodical attacks of dull, non-radiating pain in the left lumbar region, worse when lying down and relieved by motion, began in 1918. After September, 1923, the pain was very troublesome every night. Stiffness, weakness, and paraesthesias of the legs began in Octo-

\*E. B. Towne (Stanford University Hospital, San Francisco), received his M. D. degree from Harvard Medical School. He is Associate Professor of Surgery, Stanford University Medical School and Visiting Surgeon, Lane and Stanford University Hospitals. Among his many previous publications are: "The Etiology of Epidemic Poliomyelitis, Preliminary Note" (Journal A. M. A., 1916); "Bacteriological Observations in Experimental Poliomyelitis of Monkeys" (Journal Medical Research, N. S., 1917); "The Elective Localization of Streptococci From Epidemic Poliomyelitis" (Journal Infect. Dis., 1918); "The Value of Ventriculograms in the Localization of Intracranial Lesions" (Arch. Surg., 1922); "The So-called Permanent Polyuria of Experimental Diabetes Insipidus" (Proc. Soc. Exp. Biol. and Med.); "Fracture-Dislocations of the Carpals Bones" (Surgical Clin. of N. Amer.). Doctor Towne limits his practice to Surgery.

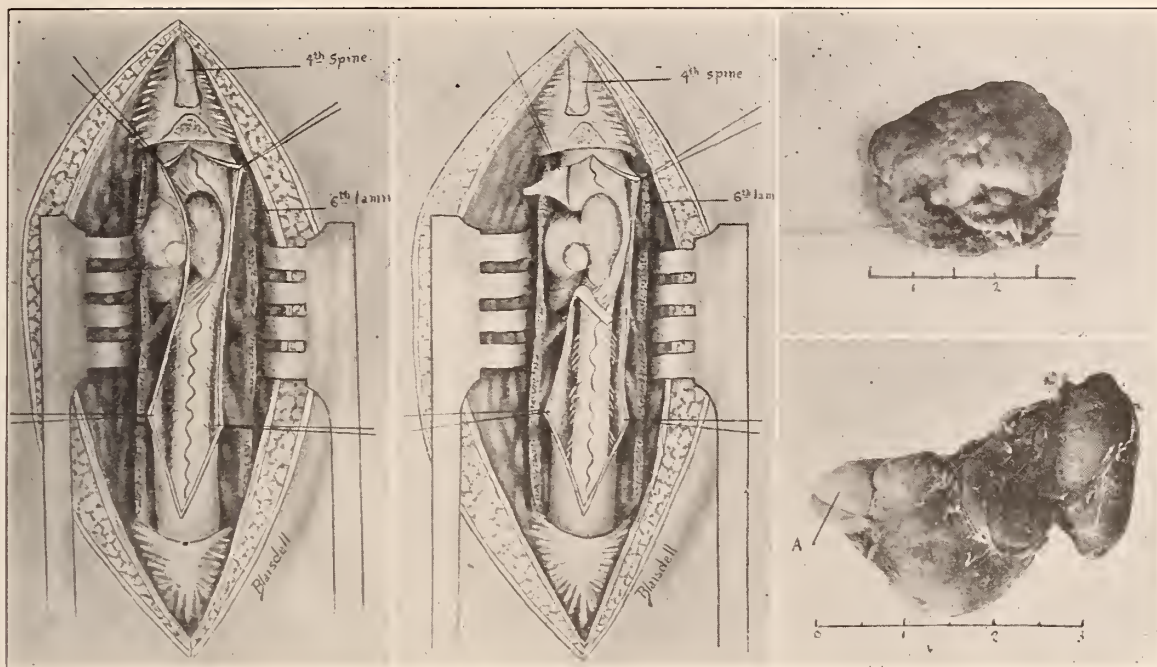


Fig. 2

Fig. 3

Fig. 1. Case 1—Photograph of tumor.

Fig. 2. Case 2—Extra and intradural tumor. Drawing from sketch made at operation.

Fig. 3. Case 2—Appearance after incision of band of dura posterior to neck of tumor.

Fig. 4. Case 2—Photograph of tumor. Capsule intact except at A, where it was included in the ligature.

ber, 1923. In 1920 the patient had a chancre, which was not followed by secondary manifestations.

**Examination**—The gait was spastic, and the muscles of the lower extremities were hypertonic. The tendon reflexes of both legs were exaggerated, the plantar reflexes were pathologic, the upper abdominal reflexes were present, and the lower were absent. There was diminished pain, touch and temperature perception up to and including the tenth dorsal segment. The functions of the bladder and rectum were not disturbed.

**Roentgenograms** of the spine and Wassermann reactions on the blood and spinal fluid were negative. The spinal fluid, which was clear and slightly yellow, showed 8 leucocytes per cmm, and positive Nonne and Noguchi reactions.

**Diagnosis**—(Dr. Thomas G. Inman.) Compression of the ninth or tenth dorsal segment of the cord.

**Operation**—December 11, 1923. Preliminary morphia and atropin, as in first case; prone position; infiltration with 300 cc. of 0.5 per cent procain containing twenty drops of 1/1000 adrenin. The fifth to the tenth dorsal laminae were cleared, and the seventh, eighth, and ninth laminae were removed. This exposed the lower margin of an extradural tumor projecting downward from under the left sixth lamina. The sixth laminae were removed, and the dura was incised, disclosing an intradural tumor (Figure 2). After a probe had demonstrated the continuity of the extra and intradural portions of the tumor, the dura over the constricted neck was incised (Figure 3). The intradural part of the growth was elevated, and posterior adhesions between the dura and the tumor were freed. This caused severe pain until an adherent posterior nerve root, thought to be the fifth or sixth dorsal, was identified and cut. Further dissection showed that the tumor extended into the foramen between the sixth and seventh vertebrae, where it was firmly attached. A ligature was slipped down over this part of the tumor and tied after freeing the capsule. The patient's pulse varied between 80 and 94 during the operation; the field was practically bloodless; and there was no pain except when elevation of the tumor put traction on a posterior root.

The tumor (Figure 4) weighed 7 gm. and measured 3.5 by 2.5 cm. Microscopic sections showed it to be a fibroma.

**Post-operative Course**—On the eighth day the plantar reflexes were normal, and the sensory loss was less marked. He walked on the eighteenth day, when examination showed no sensory loss, no spasticity, and normal tendon and skin reflexes. January 3, 1924, the patient was dismissed from the hospital. January 16 he went to work as a waiter. In February he returned to his former employment as a railroad laborer. In November, 1924, the patient reported for observation. He had been working steadily at pick-and-shovel labor, and considered himself perfectly well. Examination showed nothing abnormal.

#### CASE 3—*Negative exploration of the lumbosacral cord.*

Mr. K. B. (Disp. No. 123,888), a painter aged 51 years, entered Lane Hospital on January 8, 1924.

**History**—Rest from work had led to prompt recovery from two attacks of lead palsy; of the legs in 1915, and of the right arm in 1920. In 1922 he began to have cramp-like pains in the right hip, followed by weakness of both legs. Early in 1923 the right thigh and leg became stiff and "jumpy," and motions of the right ankle and toes were lost. The palsy increased with long withdrawal from exposure to lead.

**Examination**—The muscles of the right buttock, thigh and leg were atrophic. All motions of the right ankle and toes were absent. The flexors and extensors of the right knee were slightly weak. The knee-jerks were very active, the right more than the left. There were bilateral crossed adductor responses. The left ankle jerk was hyperactive, but the right was absent. The Babinski reflex was positive on the left, negative on the right.

The afternoon temperature was about one degree above normal. The leucocyte count varied between 9000 and 17,000. Wassermann reactions on the blood and spinal fluid were negative. The roentgenograms showed six lumbar vertebrae, with the right sixth transverse process articulating with the sacrum. The spinal fluid was clear, colorless, and showed 2 leucocytes per cmm.; one specimen gave positive Nonne and Noguchi reactions, and another gave a negative Nonne and a positive Noguchi. Twenty-five cc. of spinal fluid were replaced by the same amount of air. Dr. R. R. Newell reported: "A large quantity of air has been injected into the lower portion of the spinal canal. The nerve trunks can be seen as



slightly denser masses on either side. The canal has been demonstrated sufficiently well to rule out any except a very small tumor at the level of the second lumbar vertebra or below. Higher than this the examination gives no information."

**Diagnosis**—Opinion varied as to whether the lesion involved the conus or the cauda equina. On the basis of the pyramidal tract signs and the spinal pneumogram, exploration of the lumbosacral cord was decided on.

**Operation**—February 19, 1924. Preliminary medication as before; prone position; infiltration with 300 cc. of 0.5 per cent procain containing eighteen drops of 1/1000 adrenin. The eleventh and twelfth dorsal and the first lumbar laminae were removed and the dura was incised. The posterior aspect of the exposed cord was normal. Two dentate ligaments were cut to permit lateral and anterior exploration, which was negative. A ureteral catheter passed up and down the canal without meeting obstruction. The operation was painless, even when the cord was lifted by traction on the divided dentate ligaments.

**Post-operative Course**—The wound healed cleanly. During his stay in the hospital the patient continued to have an afternoon rise of temperature, for which no cause was ever found. He was dismissed unimproved. Dr. R. W. Harvey of San Francisco informed me that the patient had a left foot-drop, in addition to his other palsies, in September, 1924.

**CASE 4**—*Exposure of intramedullary tumor at level of sixth cervical laminae. Brown-Sequard syndrome. Improvement following roentgen-ray treatment.*

Mr. R. E. E. (Disp. No. 128,076), a laborer aged 39 years, entered Lane Hospital May 18, 1924.

**History**—For fifteen years he had been troubled by pains which radiated from the posterior cervical region toward the left shoulder. For one year he had noted increasing loss of sensation of the right leg, thigh and body up to the nipple line, and weakness of the left leg.

**Examination**—Temperature sensation was absent, pain sensation diminished, and touch sensation normal below the first dorsal segment on the right. The second dorsal segment on the left was hyperesthetic. The left lower extremity was weak. The left knee-jerk was greater than the right, and the left plantar response was pathologic.

Wassermann reactions on the blood and spinal fluid, roentgenograms of the spine, and analysis of the spinal fluid were negative.

**Diagnosis**—(Dr. Walter F. Schaller.) Tumor at second or third dorsal segment of the cord.

**Operation**—June 13, 1924. Preliminary medication and position as in previous cases. Infiltration with 100 cc. of 0.5 per cent procain, containing fifteen drops of 1/1000 adrenin. After removal of the fifth, sixth, and seventh cervical laminae, the dura was incised and the adherent arachnoid was separated from the dura. There was a slight enlargement of the cord at the level of the sixth laminae, which was at first thought to be within normal limits. Anterior exploration, after incision of a dentate ligament, was negative. A ureteral catheter passed up and down the canal without meeting obstruction. It was decided that the lesion might lie below the exposed field; and, in order to save time (as the lower limit of infiltration was at the first dorsal laminae), the patient was given a general anesthetic for removal of the first and second dorsal laminae. Bleeding was troublesome, in contrast to the dry field while working with procain. The cord under these laminae appeared normal. More careful inspection of the enlargement at the level of the sixth cervical laminae showed that cord pulsation was absent below this point. A longitudinal incision was made through the left posterior column, which exposed a yellowish infiltrating tumor 2 mm. under the pia. No specimen was taken, for fear of doing damage. The dura was sutured. The patient suffered no pain during the part of the operation which was done without narcosis.

**Post-operative Course**—The wound healed cleanly. He was in a chair on the nineteenth day, and walked on the twenty-second day, when the hyperesthetic zone on the left had disappeared, and the left leg was stronger. Roentgen-ray treatments were started on the twenty-fourth day, when the patient left the hospital. On August 7, the loss of temperature and pain sensation was

limited to the right lower extremity, the strength of the left leg was improving, and the left plantar reflex was normal. On October 4, only a few patches of temperature loss were found over the right thigh and leg. There was no motor weakness, and the left knee-jerk was only slightly greater than the right. On November 6, no sensory loss could be demonstrated. He had been doing heavy labor in a grain warehouse for six weeks. He receives roentgen-ray treatment once a month.\*

## DISCUSSION

Although textbooks on local anesthesia and on surgery of the spinal cord describe methods of anesthetizing for laminectomy, there are few reports of operations under local anesthesia. Heidenhain (*Laminectomie in Lokalanästhesie*, Zentralbl. f. Chir., 39:281 (March 2), 1912) did four painless operations, in which no intradural procedures, beyond two negative explorations, were necessary. Strachauer (*Laminectomy under local, not spinal, anaesthesia*, Journal-Lancet, 36:93 (February 15), 1916) removed a localized hypertrophic pachymeningitis from one patient, and an extramedullary tumor from another. The operations were painless, free from shock, and practically bloodless. Frazier (*Laminectomy and regional anaesthesia*, Ann. Surg., 68:12 (July), 1918) did a negative exploration, and he noted that there was pain only when the posterior roots were disturbed. Neuhof (*Giant endothelioma of medulla. Suboccipital craniotomy and removal of arches of atlas and axis under local anesthesia*, Surg. Clin. N. Am., 1:1693, 1921) operated on a patient whose condition was very similar to that of the first patient of this report. The tumor was more extensive, however, and only the presenting portion could be removed. There was no shock, but death from respiratory failure occurred thirty-six hours after operation. Ranzi (*Operationen wegen Rückenmarkstumor und ihre Resultate*, Arch. f. klin. Chir., 120:489, 1922), in Case 14, removed a small endothelioma, probably using ether for the intradural work. Farr (*Practical local anesthesia*, Phila., Lea & Febiger, 1923) removed two extramedullary tumors, one with local anesthesia alone, and the other with ether for the intradural manipulations.

These reports are in agreement with my findings. The laminectomy can be done without causing pain, while the intradural procedures may be painless, or may require temporary narcosis. Some extramedullary tumors have been removed painlessly (Strachauer, Neuhof, Farr's first case and my first case), and others required general anesthesia (Ranzi, Farr's second case). My second patient suffered momentary severe pain until an adherent posterior nerve root was cut, and he should have been under narcosis during this stage of the operation. Negative explorations and exposures of intramedullary tumors are painless (Heidenhain's third case, Frazier, the third and fourth cases of this report).

The uncertainty about how much can be done within the dura, limits the scope of such operations under local anesthesia. If the condition of the patient does not contra-indicate narcosis, there is no good reason for avoiding it, because a properly conducted laminectomy under a general anesthetic

\*This patient was working steadily at heavy labor in November, 1925. It would appear that the roentgen ray has had a beneficial effect on this tumor.

should not be complicated by troublesome hemorrhage or shock. My last three patients would probably have done quite as well after operation under ether. Case 1, however, is clearly an example of a condition in which narcosis is impossible. The respiration was almost, if not entirely, thoracic in character, and the patient was constantly under the strain of aerating the lungs by voluntary effort. In such a situation one must expose the lesion without narcosis, and, if necessary, employ nitrous oxide during the removal of the tumor. Fortunately, in this case, as well as in Neuhof's, narcosis was not required for the intradural work.

Aside from compression of the medulla or upper cervical cord, the indications for local anesthesia in exploration of the spinal cord are the same as for any other operation, such as herniotomy. Cardio-renal disease or chronic respiratory infection may make narcosis undesirable. In such cases the operation can be done under procain with minimal risk of ensuing complications. It would seem that Hibbs' ankylosing operation on the spine would offer a promising field, for patients suffering from Pott's disease are often poor subjects for a general anesthetic.

The technic employed in these operations was simple infiltration of the soft parts and of the periosteum of the laminae. Paravertebral blocking was not attempted, because it was thought that a needle introduced between the transverse processes might puncture the dura. Infiltration proved to be perfectly satisfactory. As much as 300 cc. of 0.5 per cent procain have caused no ill effect. In this, as in any other operation, the amount of 1/1000 adrenin has been kept below twenty drops.

#### CONCLUSIONS

1. Laminectomy can be painlessly carried out after infiltration with local anesthesia.
2. Exploration of all aspects of the cord, and removal of extramedullary tumors, are painless, provided that handling of the posterior columns and posterior nerve roots can be avoided.
3. Compression of the medulla or upper cervical cord, causing impaired function of the diaphragm, is a positive indication for the use of local anesthesia.
4. If visceral disease contra-indicates narcosis, exploration of the cord should be done under local, with the temporary addition of general anesthesia, if necessary, during manipulation of the cord.

Stanford University Hospital.

#### DISCUSSION

WALTER F. SCHALLER, M.D. (Medical Building, San Francisco)—Doctor Towne, in his several case reports, has given me an opportunity to again meet old friends. I recall particularly the first case reported, in which the diagnosis was obscure for a long period and, indeed, uncertain until marked and dangerous paralyses had made their appearance. Thus the operative risk, always considerable in cervical cord tumors, was made greater in the face of marked respiratory distress. I doubt if this patient would have survived under a general anesthetic. The strong point in Towne's paper, in my opinion, is the preference for local anesthesia in operations on cervical cord tumors. I witnessed one unfortunate outcome recently, following removal of an extradural cervical tumor. A general anesthetic had been given. On re-

gaining consciousness the patient was in fairly good shape, but complained bitterly of pain. The house officer ordered a hypodermic injection of  $\frac{1}{4}$  grain morphin sulphate, following which marked respiratory embarrassment ensued with a respiratory death. The post-operative condition in operations on the central nervous system following local anesthesia is in striking contrast to the condition following general anesthesia. There is a striking difference in the amount of shock and intoxication in favor of the former. In selected cases I should say that laminectomy under local anesthesia is indicated in cervical tumors and other selected cases in persons whose fortitude and temperament render them good subjects.

CARL W. RAND, M. D. (Pacific Mutual Building, Los Angeles)—That local anesthesia is the method of choice in certain instances when the spinal cord and brain are to be explored, there can be no question. It is not infrequently applicable when the ventricles are to be inflated or foreign bodies removed. Neurosurgery, as conducted in the field during the war, was done largely under local anesthesia, and it was surprising how much could be accomplished with it. I think this fact has added impetus to its more general use in civil practice. If I am not mistaken, some operators are carrying out chordotomy under local, so that the anesthesia produced by severing the pain and temperature fibers may be accurately estimated at the time and guide the operator as to the depth of his incision. General infiltration, as recommended by Towne, meets all the requirements in both cranial and spinal surgery, and is simpler than any other type of block or regional anesthesia.

HOWARD C. NAFFZIGER, M. D. (380 Post Street, San Francisco)—I feel quite in accord that local anesthesia has a definite and important place in surgery of the nervous system.

The first case of Towne's was ideally adapted to it. In the few traumatic cases that require laminectomy it should also be of value. The advisability of any considerable amount of morphine in cases with respiratory distress might be questioned. In cranial surgery local anesthesia, in my experience, has been of widest value in traumatic cases—penetrating wounds, depressed fractures, decompressions and drainage operations.

In exploratory operations and other diagnostic procedures with patients adaptable to it, it is most satisfactory.

In surgery of brain tumors, while it lessens bleeding and intracranial tension, it has certain disadvantages. One may be deterred in a tumor removal of considerable gravity by the knowledge of a conscious patient. In these, ether has its advantages. I am aware of the impression that long ether anesthetics are poorly borne, and I feel that this is true of children. I believe, however, that the risk of long anesthesia is much overdrawn.

We are a little prone to attribute post-operative results to anesthesia. Usually an unfortunate condition of the patient is much more soundly explained by other factors. While firmly convinced of the value of local anesthesia in many cases, I believe that the mental and nervous tax of a long and trying operation on a conscious patient is not to be minimized nor borne with equanimity by all of us.

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**The Sella Turcica**—Observations made by John D. Camp, Boston (*Journal A. M. A.*), based on anatomic specimens and roentgenograms show the normal sella to vary in contour and size. Variations in contour may be classed into three types: the round, oval and flat, of which the oval type predominates in the adult. The average sella will measure 1.06 cm. and 0.81 cm. in the anteroposterior and vertical directions, respectively. Variations in the shape of the clinoid processes are numerous, and union between the anterior, middle and posterior clinoids, producing a bridged sella, occurs in about 5 per cent of cases. Such an anatomic variation seems to be of no clinical significance. Pseudo-defects and apparent anomalies of structure are easily produced in a roentgenogram by faulty localizing technic. Pathologic conditions producing changes in the sella are numerous, and the differentiation of these changes as to cause is often difficult. Owing to the characteristic deformity of the sella usually produced by each, the differentiation between an intrasellar and extra-sellar lesion is generally possible.



## TUBERCULOUS CECAL TUMOR

By CLARENCE A. JOHNSON,\* M. D., Los Angeles

*There are two forms of tuberculosis of the caecum which may be met with: (1) Tuberculous ulceration of the caecum; (2) hyperplastic tuberculosis of the caecum. Hyperplastic tuberculosis of the ileo-caecal region is a remarkable condition which imitates a new growth in the great thickening of the intestinal wall and in producing stenosis.*

*Tuberculous infection may attack either the mucous membrane, the submucous tissue, or the muscular coat and the subserous layer.*

*Tuberculous ulceration of the caecum usually occurs as a terminal complication of advanced phthisis, and there is little possibility of treating it by surgical means.*

*Case report.*

*Discussion by C. P. Thomas; J. F. Percy; O. O. Witherbee; C. E. Phillips; Andrew S. Lobengier; C. W. Anderson; W. L. Huggins, Los Angeles.*

**T**UBERCULOSIS, limited entirely to the caecum, occurs rarely, being about 8 per cent of the cases involving the intestine. Primary infection of the mucous membrane from tuberculous milk, meat, or butter occurs very rarely in adults. Secondary tuberculosis of the intestine, due to the swallowing of sputum containing tubercle bacilli, is very common, and some authorities claim that over 50 per cent of the fatal cases of pulmonary tuberculosis have tuberculous involvement of the intestine. It may be, however, that in a large majority of the people who suffer from follicular ulceration of the small bowel it may be due to the pyogenic organisms contained in the sputum they swallow; and that every ulcer found in the small intestine is not necessarily tuberculous. These ulcerations, however, render the bowel more susceptible to tuberculous infection, and they eventually cause a mixed infection ulceration.

Infection of the mucous membrane of the intestine may possibly occur by the extension of the tuberculous process from the peritoneum, or as the result of the discharge from the tuberculous glands or abscesses in the lumen of the intestine; but these modes of infection are quite exceptional.

### SITUATION

Tuberculous ulceration of the intestine is commonest in the lower part of the ileum and, like typhoid fever, is more common around the ileo-caecal valve, and may extend into the appendix, giving rise to appendicitis, or into the colon. The colon may indeed be affected without the ileum being attacked, as was present in the case to be reported.

### ANATOMICAL CHARACTERS

The tubercles generally begin either in Peyer's patches or in the solitary glands, and after undergoing caseation appear as small yellowish spots, which soften down in the center, run into each other, and by opening into the intestine give rise to the earliest stage of tuberculous ulcer. The lymphoid and other tissues around are swollen from extension of the inflammatory process, and the edges of the ulcers are raised. The ulcer extends by the softening of the surrounding tubercles, while at

the same time infiltration of the coats of the intestine is proceeding. The lymphatic vessels become affected, and local peritonitis is set up. The base of the ulcer thus becomes thickened by tuberculous inflammation in its muscular and serous wall, and small white, or even yellow, tubercles can be seen on the peritoneal surface, which appears somewhat opaque and thickened. The base of the ulcer is thus protected against perforation, and may be considerably thicker than the healthy parts of the intestine.

The ulcers, which at an early stage are small and round, become large and irregular in outline. Like most chronic ulcers, they are apt to run transversely round the lumen of the bowel, this extension being preceded by tuberculous infection of the lymphatic vessels, the circular course of which is shown up by caseous spots.

There are two forms of tuberculosis of the caecum which may be met with: (1) Tuberculous ulceration of the caecum; (2) hyperplastic tuberculosis of the caecum. Hyperplastic tuberculosis of the ileo-caecal region is a remarkable condition which imitates a new growth in the great thickening of the intestinal wall and in producing stenosis. It is very chronic and has been thought to be due to infection with attenuated tubercle bacilli and other organisms, a mixture of tuberculous and simple inflammatory lesions resulting (Lartigau), or to bovine tuberculosis. The caecum and the ileo-caecal valve are the usual situations, and may extend for a short distance into the ileum.

The symptoms are usually those of chronic appendicitis accompanied often by alternating diarrhea and constipation, the stools showing blood reactions. If allowed to continue, numerous fistulae form and either discharge externally or into the intestine. The hypertrophic form, which is of more frequent occurrence, usually begins with systemic symptoms as anorexia, various phenomena of indigestion, frequently giving symptoms which are difficult to differentiate clinically from duodenal ulcer, and only showing vague localized symptoms in the right iliac fossa. The tumefaction is usually palpable, hard, frequently nodular and sausage-shaped. It is not particularly tender to pressure. Obstructive symptoms supervene, and after a course of from one to three years, usually terminate the life of the patient if unrelieved.

### DIAGNOSIS

An important factor is the existence of tuberculous disease of the lungs or peritoneum. The passage of blood may occur in simple ulceration of the intestine, but in the hyperplastic form practically never. The x-ray and fluoroscope are invaluable aids in diagnosis. Age is rather an important factor, being usually in people from 20 to 40.

### DIFFERENTIAL DIAGNOSIS

The differential diagnosis is of importance from the prognostic standpoint. It is usually fairly easy to differentiate from appendicitis on account of the slowness of onset and the presence of a dense mass. Actinomycosis should be thought of, but it is quite rare, and if any tissue or fluid can be obtained the actinomyces can be found. The most difficult dis-

\*Clarence A. Johnson (523 West Sixth Street, Los Angeles), received his M. D. degree from Rush Medical College, 1910. He limits his practice to Surgery.

tion is from malignant growths. In cancer the entire course is, as a rule, much more rapid, stenosis intervenes much more rapidly, and the tumor is more irregular.

#### PATHOLOGY

Tuberculous infection may attack either (1) the mucous membrane, (2) the submucous tissue, (3) or the muscular coat and the subserous layer. In tuberculosis of the submucous layer there is a round-celled infiltration interspersed with giant cells in the submucous tissues. The mucous membrane itself is not ulcerated in the hyperplastic form, but, according to Tuffer, when the lesion heals it contracts and produces diaphragm-like strictures. Tuberculosis of the muscular and subserous coats produces the chronic hyperplastic tuberculous tumors of the intestines. In these cases the muscularis is greatly thickened, owing to the deposition of the dense fibrous tissue, but the chief deposit of this tissue is beneath the serous membrane, which may reach a thickness of from one-half to one inch.

#### TREATMENT

Tuberculous ulceration of the caecum usually occurs as a terminal complication of advanced phthisis, and there is little possibility of treating it by surgical means.

Treatment for hyperplastic tuberculosis of the caecum causing tumor formation and obstruction from stricture of the bowel, and usually mistaken for malignant disease, is complete extirpation with resection of the glands as far back as the origin of the ileocolic artery. The intestine should be resected, eight inches of the ileum, and at the junction of the upper and middle third of the ascending colon so as to include the right colic artery and its accompanying glands. Lateral or end anastomosis between the lower ileum and ascending colon should follow, or be short-circuited by lateral anastomosis. The best results have followed resection.

#### CASE REPORT

A male, 22 years of age, white, entered the General Hospital on April 26, 1923, with a swelling of the fifth metacarpophalangeal joint of the left hand. Patient states that five years ago (1918) he injured this finger and it continued to swell until it became an inch in diameter, sensitive to touch, but not sore. There was no drainage of pus discovered at this time. Soon after this the patient had influenza with double pneumonia following, which left him with pulmonary tuberculosis. He went to El Paso, Texas, for treatment of the tuberculosis and made a satisfactory recovery. While in El Paso, in 1920, the lesion on his finger was removed, which healed, apparently without any infection. It began to grow soon after this, however, and was removed again early in 1921. There were no signs of its recurrence again until January, 1923, and three months from this time he entered the General Hospital for its relief.

Patient has had whooping cough, measles, mumps, and influenza in 1918, which left him with pulmonary tuberculosis. He has had no accidents and only the operations mentioned above. His family history is negative. Father and mother living and well. Has never had any brothers or sisters.

The patient is a young man, fairly well nourished, who walked into the hospital apparently in no pain. Temperature, pulse, and respiration normal. Breath-sounds not accentuated; no definite areas of dullness, but slightly duller over both apices. Few crepitant rales heard over right upper lobe near inner angle of the scapula; fremitus normal. Heart normal. During this examination, a tumor mass was discovered in the right lower quadrant

of the abdomen, which was irregular and tender on deep palpation; most easily movable to the left horizontally, and adherent to the structures below. There is a slight rigidity of the muscles on the right side. No other pathology noted. Genito-urinary negative. The extremities are normal as to adenopathy, motion, and arthritis, with the exception of the upper left, which shows a swelling on the fifth metacarpophalangeal joint on the dorsal surface. This swelling is red, warm, slightly fluctuating, and upon pressure a brownish pus exudes. Reflexes: Plantar, anterior tibial, knee-jerk, abdominal and forearm not exaggerated and are responding equally on both sides.

**Laboratory Findings**—Urine: Quantity passed in twenty-four hours, 1500 cc.; color, straw; specific gravity, 1010; reaction, acid; albumen, 0; sugar, 0; no casts or pus cells found. Blood: Hemoglobin, 70 per cent; red cells, 3,200,000; white cells, 6000; polys., 52 per cent; small monos., 18 per cent; large monos., 30 per cent; Wassermann, negative. X-ray: X-ray of hand showed rarefaction at the distal extremity of the fifth metacarpal at the site of the previously reported lesion, giving appearance of operative interference. X-ray of colon, after barium enema, showed annular filling defect of ascending colon at the site of the palpable mass. Gives appearance of neoplasm.

**Pre-Operative Diagnosis, Indications for Operation, and Operative Procedure**—Caecum was resected by myself on May 14, 1923, and was tuberculous. Indications: Tumor mass and partial obstruction of the bowel. Procedure: A right rectus muscle-splitting incision was made, opening directly upon the mass in the right lower quadrant, which revealed tuberculosis of the appendix and caecum. Appendix ulcerated at base. Tubercles encircling the ascending colon to within 10 cm. of the hepatic flexure. The entire mass was bound down to the posterior abdominal wall. The mass was easily dislodged and the ascending colon, caecum, appendix, and 6 cm. of distal end of ileum removed by cautery. Murphy button, end of ileum, and side of colon anastomosis performed. Wound closed by No. 1 catgut double on peritoneum; No. 1 chromic double on fascia; four silkworm sutures and dermol; three rubber dam drains inserted around the resected area.

**Gross and Microscopic Description of Tissue Removed**—Specimen consists of caecum, small portion of ascending colon, appendix, and 6 cm. of ileum. Portions of omentum are plastered to the caecum, and it is very firm. The surface is ragged and of a dark red color. The wall of the caecum is greatly thickened and firm, but not nodular, the average thickness 7 mm. It is uniform and almost cartilaginous. This thickness ends abruptly at the ileo-caecal valve, and distally it tapers out to where the first portion of the ascending colon resumes its normal thickness. The mucosa is polypoid with numerous small, firm tongue-like prolongations of mucosa. There is no ulceration of mucosa. Ileum does not appear to be altered; neither does ascending colon. Microscopic examination shows a picture of one of the infectious granulomata, probably tuberculous.

**Final Diagnosis**—Tuberculosis of the caecum.

**Progress Notes**—Patient did not take ether well; had 15 minims of camphor in oil, 2 grains of caffeine sodium benzoate, and 1300 cc. of normal saline during operation. Returned to ward. Pulse 88; respiration 20. Had four hypodermics of morphine, one-fourth grain, following operation. Had hypodermoclysis for the first few days—in all about 5000 cc. of normal saline, together with Murphy drip of 5 per cent soda and glucose. Temperature rose to 103.6 on the third day (May 17), but gradually subsided and was normal on the seventh day (May 20), and remained so throughout his convalescence. Patient voided the morning after the operation, and continued to do so normally thereafter. Patient received nothing by mouth until the eighth day after the operation, when fruit juices were allowed. Murphy button passed on June 2 with considerable leakage about the incision, which continued until he left the hospital on June 3 on full diet.

**Condition on Discharge**—Patient was feeling much improved, but was to secure more favorable quarters where he might receive the application of the sun to the wound.

**Follow-up Notes**—I saw patient again on July 1, 1923, when he stated that he had gained about ten pounds. He reported to me again on September 4, four months after



operation, stating that he had gained thirty pounds since his operation. Reported to me again on March 7, 1924, stating that he had been working for four or five months and that he was feeling as well as he ever did.

523 West Sixth Street.

#### DISCUSSION

C. P. THOMAS, M. D. (607 South Hill Street, Los Angeles)—This paper brings out very well the two types of tuberculosis of the caecum, and Johnson is to be congratulated on having brought out the subject in the thorough manner in which he did. Most of these patients come to us late, and after tumor formation and the typical sausage-shaped mass, which Johnson described in his paper, is found. I wish to commend the use of the Murphy button as Johnson used in the case he reported, as it can be done more quickly and with much less trauma and risk of infection than any other method.

J. F. PERCY, M. D. (1030 South Alvarado Street, Los Angeles)—I would like to ask Dr. Johnson what he considers the origin of the interesting tumor which he reported, whether from the hand or from the lungs? Some years ago I treated a 6-year-old child suffering from a tuberculous involvement of the bones and soft structures of the hand and wrist. There was a large area of destruction, so that not only the tendons, but the bones were exposed. While still under treatment for the hand, a tubercular mass developed in the caecum of the same general type that Johnson has reported. This I removed with a very satisfactory result, and the patient is still living.

I especially want to recommend the use of the x-ray in the treatment of superficial tubercular lesions. In the child which I have just mentioned, not only was the condition cured, but she ultimately had a most useful hand.

O. O. WITHERBEE, M. D. (523 West Sixth Street, Los Angeles)—Tuberculosis of the caecum can be most easily confused with chronic appendicitis, as Johnson has brought out. It is amazing how well a patient may get along with a contracted lumen of the small bowel. One of my patients, who is still living, had at the time of the operation (fifteen years ago) several contracted areas of the small intestine.

CHARLES E. PHILLIPS, M. D. (523 West Sixth Street, Los Angeles)—I wish to emphasize the importance of a thorough resection in these cases, getting well back into normal tissue, as they do not heal well and it is always advisable to leave all tissues as normal as possible.

ANDREW S. LOBINGIER, M. D. (Merritt Building, Los Angeles)—I wish to emphasize the statement of Dr. Phillips, urging the necessity of doing a wide resection, carefully walling off the area to prevent soiling, before any attempt is made to remove the bowel. These wounds repair slowly in most instances. I also wish to congratulate Dr. Johnson on the success he had with the case reported, as we all realize that the majority of cases of this character do not lead to such a happy result.

I have observed a great many of these patients and found that ulceration was much more common than we have been led to suspect.

C. W. ANDERSON, M. D. (523 West Sixth Street, Los Angeles)—I have had occasion lately to see two patients with tumor mass in the right lower quadrant, which resembled the condition described by Johnson.

The first had been diagnosed appendix abscess, and had absolutely refused operation before I saw her. Under expectant treatment the temperature and pulse became normal, and the pain and tenderness cleared up; but the tumor remained until a dose of castor oil was given, when it promptly disappeared. Following this the patient was well for several weeks, and then had a similar attack with recurrence of the mass, which again disappeared after a purgative.

Operation later revealed a retro-caecal appendix, which apparently had doubled the caecum on itself in such a way as to favor the accumulation of fecal matter.

The other patient, a man 50 years of age, had pulmonary tuberculosis. The disease became arrested and he remained well until one year ago, when he had a hemorrhage from a duodenal ulcer. Under Sippy treatment this

healed, and x-rays taken recently show no abnormalities in this region. Recently, he was taken sick with what was apparently sub-acute appendicitis. Under starvation and ice-bag treatment the temperature and pulse had become normal when I first saw him, three days after the onset of the attack. There was a slightly tender mass in the right lower quadrant. Castor oil, given several days later, failed to affect this mass, and x-rays taken three weeks later show a lack of filling of the caecum on its inner side, and I believe that this is a case of hyperplastic tuberculosis of the caecum.

WALTER L. HUGGINS, M. D. (523 West Sixth Street, Los Angeles)—I saw a doctor's wife some years ago who had been at a celebrated clinic with a general tuberculous involvement of the intestines which matted them down, and all that could be done was an anastomosis. This was ten years ago, and the patient is apparently well at this time—which seems to prove that opening an abdomen will often cure a condition of this kind.

DOCTOR JOHNSON (closing)—I wish to thank the gentlemen for the discussion of my paper. In answer to Dr. Percy's question regarding the origin of the infection in the case reported, I am inclined to believe that it came from the hand, as it came before he had the influenza and tuberculosis in 1918. In reply to Dr. Lobingier's suggestion of ulceration of the mucosa, I will state that my experience has been rather limited in this particular condition, but I intended my discussion particularly for the hyperplastic tumor, in which, I am led to believe, ulceration is not a common occurrence.

#### QUESTIONABLE OPERATIONS AND TECHNIQUE

By FREDERICK A. RHODES,\* M. D., Los Angeles

*Are there many unnecessary operations? If so, who is to blame? Some reasons that patients forsake the regular physicians and visit various cultists.*

*Are some of the popular major operations of questionable value? Who shall judge as to the value of certain operations?*

*Some errors of technique. Status of Cesarean section and other methods of rapid delivery. Value of endocrine therapy in surgical conditions.*

*How can we obtain more complete records of all operations showing the cause and findings? Should such records be made a part of the state's vital statistics?*

*A better knowledge of pathologic-physiology and a more charitable relation between medical men desirable.*

EVERY surgeon has at some time wished that he had not performed a certain operation. It may have been because a tonsil had bled too much, or one of the ureters was cut while doing a difficult hysterectomy.

One reason surgery is not respected by some is, that many attempt difficult operations without having had the proper training. It is difficult for the newcomer to California to tell whether Dr. Smith,

\*Frederick A. Rhodes (420 Wright & Callender Building, Los Angeles), M. D. University of Pittsburgh, 1900. Formerly Professor of Physiology, Medical, Dental and Pharmacy Departments, University of Pittsburgh. Practice limited to Surgery. Hospital connections: Hollywood Hospital. Publications: *Applied Physiology* (Medical Press, Pittsburgh, 1908), *The Next Generation*, Richard Badger Company, Boston, Mass., 1915; *The Cautey in Treatment of Jacksonian Epilepsy* (Jour. A. M. A., Sept. 23, 1916); *Care of Pregnant Woman* (N. Y. Times, Aug., 1910); *Ante-Operative Diagnosis and Findings in Abdominal Surgery* (Bulletin Allegheny County, Pa., Med. Society, Feb., 1916); *Introspection in Gynecology* (American Journal of Obstetrics, 1915); *Emergency Abdominal Operations* (Bulletin Allegheny County, Pa., Medical Society, June 1914); *Diagnosis of Ectopic Pregnancy* (Amer. Jour. Obstetrics, 1918); *Carbohydrate Metabolism* (American Medicine, Dec. 10, 1904); *Physiology of Temperature*, etc. (Amer. Jour. Obstetrics, 1906), etc.

whose name is found in the telephone book or seen on a window, is an educated, ethical physician, or one of the numerous "doctors" permitted to practice on the public without having had adequate education.

A questionable operation does not take into consideration deferring emergency operations on account of money consideration, if unable to place the patient in a charitable institution at the time; nor does it have to do with the operations done under unfavorable conditions when the patient could be transferred to a proper operating-room without danger to him.

A questionable operation does take into consideration two important questions: Will the patient be better for having had the operation performed, and would the surgeon desire such an operation of identical indications on one of his own family?

Because some physicians make a too quick diagnosis of appendicitis and what not, and advise an immediate operation, many persons forsake the regular physicians and consult the numerous cultists. We are largely to blame for the many irregulars among us today. Frequently, a patient tells us that some physician has insisted on an immediate appendectomy after his appendix had been removed years before. Many a drugless healer states that hundreds of healthy appendices have been removed. Recently, the question occurred to me: Should a surgeon who depended upon the fee for the next operation perform same, if there is any doubt as to the correct diagnosis, without consultation with another surgeon?

In 1916, I presented a paper on ante-operative diagnosis and operative findings, in which I urged that each hospital should require every surgeon to enter on a record, which could be seen by those entitled to see it, the diagnosis before the operation, the name of the consultants if any, also the operative findings. I have kept such records for the past fourteen years. All good hospitals now require this and much more for the protection of the patient. I now believe that every hospital should report to a bureau of vital statistics every operation performed, setting forth the diagnosis, operative findings, consultants, and result. Such reports would make valuable our statistics, which now mean very little. They would show the value of certain operations; they would enable us to know of the many unusual cases, and what is of far greater importance to the public, they would prevent many unnecessary operations and illegal abortions. The method of inducing labor and indication for such, as well as all surgical operations for the delivery of the child, should be included in compulsory reports—all these reports to be signed by the operator or obstetrician.

In questionable operations, probably the most important factor to be considered is whether the patient is in a physical condition to undergo the operation indicated. The operation is questionable because the outcome is in doubt. The occasional death from post-operative pneumonia is due to the patient's respiratory tract being filled with pathogenic bacteria. The operation upon the anemic patient with ether must be postponed unless urgent. It requires a fairly good constitution to withstand the

shock, due to the anesthetic and manipulations of a surgical operation.

I have found it very satisfactory to perform many major operations under local anesthesia with or without morphine and hyoscin. By this method we can do radical operations for the removal of the breast, operations on the gall-bladder, pelvic organs, appendectomies, prostatectomies, relief of intestinal obstruction, without the danger of pneumonia or shock, and recovery is more rapid than with ether or gas.

It is questionable whether it is wise for a surgeon to permit a patient to be transported a long distance for an operation, if the patient would be the worse for the travel, provided the operation could be done as well with less danger at a nearby hospital. The mortality rate of many a small town physician or surgeon who has not been advertised is not much greater than that of some of the larger clinics.

#### TECHNIQUE

Every operator has his own peculiar tricks and ways of doing things, and it would be absurd to ask a surgeon who has good results to change his procedure to conform to that of some well-known surgeon who may be a little more polished, but whose results are no better. I will mention but a few of the important points for consideration.

*Delay*—Much harm can result to the patient if the operator wastes valuable time in talking to visiting students and physicians when he should be doing his work and getting the patient off the table as soon as is consistent with good work.

*Too Many Assistants*, with unnecessary hands to be kept sterile, like too many instruments and dressings, are to be avoided, as such add to the responsibility of the surgeon by increasing the possibility of infection.

*Careless Handling of the Intestine and Other Viscera* is very bad for the patient. Many a patient has gotten along fairly well until a first operation has been the cause of adhesions that demanded one or more subsequent operations to relieve. The operator should know what to do and not allow his manipulations to be guesswork. Until he is able to do so, he should assist someone who does know.

*Drainage*—In all acute conditions of an inflammatory nature, due to pathogenic bacteria, use drainage if in doubt. If the appendix is inflamed, but no rupture or effusion, the incision can be closed without a drain, but there is no harm in allowing a small split rubber drain to remain for a couple of days, and you have a feeling of safety. In old abscesses, such as a pus tube, in which there has not been recent elevation of temperature, even if the tube ruptures during the operation, it is not necessary to use drainage. The same holds true for ruptured tubal pregnancies and other extravasations of blood where there is no possibility of infection having taken place, and when there is no reason to suspect leakage. It is not even necessary to exert one's self to remove the blood in these cases. We should not try to wipe the abdominal cavity dry, for by so doing the peritoneum is injured and there are more adhesions than otherwise would result.

If there has been a rupture of the intestine, some-



times it is best to make a low counter-opening and flush out the abdomen with normal saline solution rather than try to do the impossible thing—that of removing all the debris with sponges. The location of the rupture will determine the wisdom of this procedure. Nature absorbs large accumulations of blood and pus in a short time if given opportunity.

*Anastomosis of the Intestine*—Many good surgeons get excellent results by using end-to-side and side-to-side anastomosis in repair of the colon, but for years I have used the end-to-end method only with very satisfactory results; it seems to be the natural method for physiologic peristalsis. Nature allows many persons to live fairly comfortable, in spite of the many contortions in the abdominal cavity.

I am convinced that a large number of pelvic abscesses and hemorrhages following operations are due to the use of catgut of too large size. It is impossible to make a good knot that will not slip or permit leakage with large size catgut. In abdominal work, the surgeon should not use larger than No. 1, and in most instances still smaller will do. A double ligature of "0" is stronger than single No. 1, and will absorb better. We are gradually getting away from the use of non-absorbable ligatures in the abdominal cavity. It is quite possible that many a gastro-jejunal ulcer has been due to the use of silk suture at that site when the anastomosis was made.

It is a questionable form of technique to use too tight clamps in making an anastomosis, and the failure to loosen the clamps or remove them entirely, before placing the last row of sutures, often permits a serious hemorrhage.

*Strychnine* is useless in the treatment of shock during operation.

It is positively dangerous to remove a section from a lip, breast, or cervix, and expect to do a radical operation the next day if the section proves to be malignant. If a section must be removed for diagnosis it should be examined as a frozen section with the operation carried on, if necessary, within a few minutes. When possible, remove such sections with a cautery knife, which destroys bacteria, seals up the lymphatic vessels, and destroys cancer cells for a little distance from the line of incision. In carcinoma of the lip, high amputation of the cervix, removal of the breast, superior maxillary bone, vaginal hysterectomy, section of the cheek, ulcer of the stomach, carcinoma of the stomach and intestine, it is the instrument that should be used. It is a most valuable method of removing the suppurating appendix.

In carcinoma of the colon, stomach and removal of the prostate, it appears to me more convincing each year that when a radical operation can be done in one stage with safety it is to be preferred to the two-stage operations. Generally speaking, an operation of one and one-half hours is not so harmful to the patient as two of one hour each, from two to four weeks apart.

The attending physician very frequently causes the surgeon much worry as to the exact situation before them, because he has given the patient morphine, and the true symptoms or exact pathology is masked until too late for a satisfactory operation; many a life has been lost this way. Pain-killers in

abdominal conditions should never be given until a diagnosis has been made, and we should broadcast over every radio in this land that a purge should never be given for abdominal pain until the cause is known or it is certain that it is not intestinal trouble of some kind, which would be made worse by such medicine. Many a patient has been so comfortable after the appendix has ruptured or gangrene has occurred that he refuses operation until it is too late to save the life.

Many incomplete operations are questionable because they only relieve the patient for a short time and do not allow the patient to know that a radical operation is necessary to get a complete cure. Such are: The opening of an abscess connected with a fistula-in-ano, an incision into a carbuncle, a tubercular joint, or an arm with osteomyelitis.

An inexcusable, incomplete operation is where a gynecologist allows his specialty to be so fixed that he cannot operate upon anything outside of the pelvic organs of women. Such a surgeon will close up an abdomen without having finished the work when he should have been able and willing to remove all pathologic conditions as far as possible, whether a diseased gall-bladder, duodenal ulcer, or what not.

#### YES AND NO

In the last few years we have learned that the endocrine glands exert a powerful influence upon the body-at-large. We know that accidental cures in the unscientific use of these products is now causing a flood of literature from both reputable and disreputable manufacturers. Much of this literature is read by both physicians and laymen.

In former years we operated upon many patients for sterility, amenorrhea, dysmenorrhea, uterine hemorrhage and ovarian pain, many of whom we are now able to relieve by the administration of ovarian, thyroid and pituitary products. On the other hand, it is for the surgeon to determine when such patients do need operation. Mechanical conditions are never relieved by ovarian substance, nor are dense adhesions broken up by pituitary extract.

There are certain conditions, often grave and, at times, apparently innocent, as in affections of the gall-bladder, mastoid, tonsils, nose, stomach, which may or may not need surgery. Charles K. Mills said: "Due to the report that the death of Colonel Roosevelt was caused by diseased teeth, bushels of excellent teeth have been extracted. An abscess cannot be diagnosed by a roentgenogram of the teeth. If the violent craze for the removal of teeth goes on, it will come to pass that we shall have a gutless, glandless, toothless, and perhaps, to psychology and surgery, a witless race."

I am a firm believer in the removal of diseased organs when advisable. I am sure that in many instances arthritis, endocarditis, and duodenal ulcer are due to infection of the teeth or tonsils, but we must not think that all diseased conditions of the body are due to focal infection from these two sources.

It does appear as if physicians have been too apathetic in the matter of the education of the public, and in consequence some dentists have exaggerated the amount of dental disease, causing public alarm.

It is possible that a large percentage of tonsillec-

tomies, sub-mucous resections, mastoid operations, gastro-enterostomies, especially for gastric ulcer and pyloric stenosis in infants, are unnecessary. Many good medical men now claim that frequently this latter condition will correct itself if given time.

One operation of great value when indicated, but probably more frequently unnecessary than any other, is Cesarean section. The trouble is that some operators are not obstetricians and cannot wisely decide just when a woman has had a real test of labor.

In my maternity service at the University of Pittsburgh Maternity Hospital for five years, all the babies were delivered by the natural route. When I look back over the records, I can see where I might have saved a baby if I had performed a Cesarean section; but when I look further I console myself with the thought that one of these women might have died, whereas in the five years there were no maternal deaths. I still believe that the life of the mother is to be considered before that of the child, if a choice has to be made.

At times uterine curettage for the removal of placental tissue in incomplete abortion is necessary, but in the majority of cases the curette is questionable, except when lacerations of the cervix have, when healed, produced a hard cervix with small canal; it is seldom that a uterine dilator is necessary when curettage is indicated in endocervicitis. The disease will produce sufficient softening of the cervix to permit the use of a small curette without the use of a dilator. A good rule is, if a small curette will not enter into the body of the uterus without dilatation, the cervix should be amputated instead of the usual repair.

Blood transfusion is often valuable and necessary before urgent operations and will prolong the life of patients with pernicious anemia, but it is often used when not necessary.

Artificial respiration saves thousands of lives every year, but I have yet to see the value of the pulmotor.

It has been advocated that practically all women who do not insist upon delivering themselves should be delivered by version. Can any of us imagine the great mortality to both mothers and children if such a procedure were adopted by all physicians? This is a wonderful age in which we are living. Some obstetricians, physicians and surgeons are apparently trying to keep pace with the radio and the crime wave.

Is it possible that social demands may become so great upon the obstetricians who attend the rich that ere long they will have a clientele who will demand that the day and hour be set for the delivery of the expected child. Many now ask for anesthesia and abdominal section, in preference to enduring labor pains. There are some obstetricians today who send their patients to the hospital, give them the required amount of quinine and castor oil, put on the forceps, and continue on their week-end as per schedule.

At times it is advisable to do an immediate repair of the cervix, but in most cases it should be deferred until the child has been weaned or until the uterus has returned to normal size. The extent of the tear and danger of infection will be determining factors as to the advisability of an immediate repair.

Many heads have been bored into after an injury to hasten recovery. It is an excellent operation, but only in a small proportion of patients is decompression indicated.

There is no question but that many persons are relieved by the removal of bands, adhesions and kinks, and I am a firm believer in such operations, but I insist that there are many persons whose abdomen is full of contortions and bands, this adhering to that, who are not suffering from these conditions. One small band producing a constriction of the intestine may do more damage than a whole abdomen full of adhesions where there is no obstruction. Except in cases of acute obstruction, let us insist that the roentgenologist diagnose these conditions as fully as he is able to do.

Operations for ileus and acute dilatation of the stomach are often questionable. Both of these conditions are frequently due to infection. Often an immediate operation is necessary, but when done the motto should be constantly before the surgeon: know what to expect; do your work; and stop in time.

Cerebrospinal pressure measured by the manometer is of value, but we must remember that it does not always tell whether the pressure is the same in the spinal canal and ventricles of the brain. There is such a thing as internal hydrocephalus and there can be an obstruction to the flow of the fluid from the ventricles to the spinal canal. Aspiration of the ventricles is of great value at times.

It is quite possible that a sufficient number of spleens have been removed for the cure of pernicious anemia to prove that the operation, while prolonging life, is not curative.

#### OPERATIONS QUESTIONABLE

*Implantation of the Ureter*, a difficult procedure for a successful result, is practically always followed by infection of the kidney. Other methods, while not so comfortable for the patient, will give a better expectation of life.

*Intra-uterine Insufflation* to diagnose the patency of the tubes has given good results in the hands of some surgeons, but is a very dangerous procedure as general routine. If all would practice the method there would be a great epidemic of peritonitis. The same holds true for compression of the lung by air.

Radium is of value in hemorrhage from the uterus. It will diminish the size of fibroid tumors, but for destroying malignant growths without other methods I have never seen a patient cured; and I have referred many patients with different stages of carcinoma of the cervix, tongue and pharynx, to qualified radium experts, both before and after operation. Too frequently the temporary relief gives the patient a sense of security and a radical operation is deferred until too late, even if a cure was possible when first seen. I hope my opinion is wrong and much good can be done with radium.

I have not yet been convinced of the value of the removal of the colon; to an anastomosis of the terminal end of the ileum to the sigmoid for intestinal toxemia; to operations for the reconstructions of the ileo-cecal valve, or attempts to shorten the sigmoid.

An operation for anuria is questionable until it



has been shown only one urinary tract is involved, except where there is anuria from calculi in both ureters at the same time. The causes of anuria are many; there may be a reflex condition, a local mechanical, alterations in the blood pressure and toxemias.

The prolonged life given some women who have had a radical Wertheim operation, which aims to remove all the malignant glands from the pelvis when removing the malignant uterus, is not compensated for by the great primary mortality and more deaths later on, due to shock. Furthermore, the convalescence is very much longer.

Before we knew so much about the physiology of the thyroid, experimenters placed transplants beneath the skin in various parts of the body and obtained temporary benefit. The same has been found true for transplants of the ovary and testicle; yet aside from the large fee obtained when such operations are performed, why submit patients to the operation and give them a sense of false security and extract a large amount of money like the quack? A surer, less dangerous, more rational procedure is to administer the glandular products by mouth or hypodermically if they are indicated. Tell the patients that if they receive benefit it will be only temporary.

Many surgeons have relegated to the scrap-heap of hobbies and fads decapsulation of the kidney. I have never used bone plates, but many do, and frequently remove them. Many an interposed uterus has to be removed by operators who believe the operation is of great value.

Some of the operations for shortening the round ligaments are very irrational and harmful, but a few are of great value for conditions indicated.

#### GOOD OPERATIONS DENIED BY MANY

A very valuable operation for intestinal intoxication and colitis, is appendicostomy or cecostomy, as may be preferred. This, followed by irrigation with mercurochrome or other intestinal germicide, very frequently gives excellent results.

There is no operation which has given me so much delight from the good results obtained as that of simply opening the abdomen and allowing the atmospheric pressure, or whatever it is, in tuberculous peritonitis to work. The cause of the cure we do not know, but many cures have been marvelous. It does not seem to make any difference whether we use a saline solution, force in oxygen to be absorbed, or simply allow the air to play some minutes within the cavity, the results are the same. But we must not use a drain, even when there is much fluid.

There are many operations which I may do that others think foolish, and I do not see any reason for some of the procedures that others follow. Let us study man, his anatomy, the physiology of the entire body, both in health and in disease, and endeavor to discover, if it is possible, how best to remove diseased conditions to re-establish some of the lost function, if not all. Before deciding upon any procedure, let us be certain that we have used every means at our disposal to know what we are dealing with and the best treatment for the good of the patient.

## NASAL (SPHENO-PALATINE—MECKELS) GANGLION NEUROSES

By LAWRENCE K. GUNDRUM,\* M. D., Los Angeles

DISCUSSION by Philip C. Means, Santa Barbara; J. A. Bacher, San Francisco; George H. Kress, Los Angeles.

THE sphenopalatine, Meckel's or nasal ganglion, is deeply placed in the sphenomaxillary fossa, close to the sphenopalatine foramen. It receives the two sphenopalatine branches, which descend together from the superior maxillary nerve as it crosses the top of the fossa. It is of a reddish-gray color, triangular in form, and convex on the outer surface, and measures from before backward about 5 mm.

Branches proceed from the ganglion upward to the orbit, downward to the palate, inward to the nose, and backward through the Vidian and pterygopalatine canals.

*Ascending Branches*—These are two or three very small twigs, which reach the orbit by the sphenomaxillary fissure, and are distributed to the periosteum and to the mucous membrane of the posterior ethmoidal and sphenoidal sinuses.

*Descending Branches*—These are three in number—the large, the small, and the external palatine nerves, and are in great part continued directly from the sphenopalatine branches of the superior maxillary.

(a) The *large or anterior palatine nerve* descends in the palato-maxillary canal, and divides in the roof of the mouth into branches which are received into grooves in the hard palate, and extends forward nearly to the incisor teeth. In the mouth it supplies the inner side of the gum, the glands, and the mucous membrane of the hard palate, and joins in front with the nasopalatine nerve. While in its canal the large palatine nerve gives off one or two *inferior nasal* branches, which supply the mucous membrane over the greater part of the inferior turbinate bone, together with the adjoining middle and inferior meatuses of the nose.

(b) The *small or posterior palatine nerve* enters the lesser palatine canal, and is conducted to the soft palate, the tonsil, and uvula. It has been thought to convey motor fibers from the facial nerve to the levator palati and azygos uvulae muscles.

(c) The *external palatine nerve*, the smallest of the series, courses through the external palatine canal between the maxilla and the tuberosity of the palate bone, to be distributed to the tonsil and the outer part of the soft palate.

*Internal Branches*—These consist of the nasopalatine, and the upper nasal branches which ramify in the lining membrane of the nasal fossa and adjoining sinuses.

The *upper nasal* are very small branches, and enter the back part of the nasal fossa by the sphenopalatine foramen. Some are prolonged to the upper and posterior part of the septum, and the remainder ramify in the membrane covering the upper two spongy bones, and in that lining the posterior ethmoidal cells.

The *nasopalatine nerve*, long and slender, leaves

\*Lawrence K. Gundrum (610 South Broadway, Los Angeles), M. D. Washington University Medical School, Missouri, 1919. Practice limited to Otorhinolaryngology.

the inner side of the ganglion with the preceding branches, and after crossing the roof of the nasal fossa is directed downward and forward, in a slight groove on the vomer, toward the anterior palatine canal. The nerves of opposite sides descend to the palate through the median subdivisions of the canal, called the foramina of Scarpa, the nerve of the right side, usually behind that of the left. In the lower common foramen the two naso-palatine nerves are connected with each other in a fine plexus; and they end in several filaments, which are distributed to the mucous membrane behind the incisor teeth, and communicate with the great palatine nerve. In its course along the septum, small filaments are furnished from the naso-palatine nerve to the pituitary membrane.

*Posterior Branches*—The branches directed backward from the ganglion are the Vidian and pharyngeal nerves.

The *Vidian nerve*, arising from the back part of the ganglion, which seems to be prolonged into it, passes backward through the Vidian canal to the foramen lacerum, where it divides into the great *superficial* and the *great deep petrosal nerves*. While in its canal, the Vidian nerve gives some small *nasal branches*, which supply the membrane of the back part of the roof of the nose and septum, as well as the membrane covering the end of the Eustachian tube; and it is joined by the sphenoidal filament from the otic ganglion.

The *large superficial petrosal nerve*, entering the cranium on the outer side of the carotid artery and beneath the Gasserian ganglion, is directed backward in a groove on the petrous portion of the temporal bone to the hiatus Fallopii, and is thus conducted to the aqueductus Fallopii, where it joins the geniculate ganglion of the facial nerve.

In 1908, Sluder published his first report of certain neuralgic pains which he attributed to a diseased nasal ganglion. For several years he experimented with various local applications, applied to the mucous membrane over the ganglion. Among the drugs used were cocaine, silver nitrate, menthol, formaldehyde, and phenol. He was successful only to a limited extent. He then tried injections of alcohol into the sphenomaxillary fossa. This, although successful in alleviating the symptoms to a large extent, was so painful, and was followed by so severe reaction, that it was abandoned. He now uses 5 per cent solution of phenol in 95 per cent alcohol, with a maximum of efficiency and a minimum of pain. Since that time Pollock, Dean, Sauer, Bryan, Stein, and many others have corroborated his findings and have added to the list of symptoms due to the disease of this ganglion. Holmes uses his nasopharynxoscope for guiding a specially constructed needle in making the injection.

Due to the close association of the sphenomaxillary fossa to the nasal sinuses, and to the extreme thinness of their walls, in many instances, the ganglion is very prone to be affected in severe sinusitis, and especially in long-standing post-ethmoidal and sphenoidal inflammations.

The symptoms of this affection may be divided into two types: (1) Those cases in which the symptoms are of short duration, with remissions during

which the patient is entirely comfortable, and (2) those where the symptoms are always present to some extent, but vary greatly in intensity. Each of these may be divided into two types: (1) Those cases where pain is the chief symptom and (2) those where the vasomotor secretory phenomena predominate. Many cases are a combination of these two types.

The chronic type often follows a severe rhinitis, which has lasted longer than the ordinary coryza and in which, I believe, either the sphenoid or posterior ethmoid has been involved. This sinusitis may or may not have cleared up before the pain sets in. Often, however, there has been considerable headache associated with the cold. The symptoms may come on suddenly or, as is more often the case, begin with a slight headache and gradually increase, often with remissions, increased with subsequent coryza. The neuralgic syndrome, when complete, consists of pain at the root of the nose, about the eye, upper jaw, teeth, extending to the zygoma and temple, with earache, pain in the mastoid, occiput, neck and shoulder, even many times extending to the arm, forearm, and finger. The secretory syndrome may or may not be co-existent. This consists of sneezing, rhinorrhea, lacrimation, and photophobia. The sense of taste may be diminished on the anterior half of the tongue. Vertigo may be present. Rarely, however, are all of the above symptoms present.

Sluder has reported a number of isolated symptoms which have been relieved by the treatment of this ganglion. Among these are pain, accompanied by nodule formation in the scalp and the nape of the neck. These nodules sometimes disappear immediately after the attack, but are often present for a week or more after the pain ceases. Nausea, parosmia, otalgia, scotoma, photophobia, rhinorrhea, glossodynia, and crycodynia, are also isolated symptoms. Typical attacks of hay-fever are usually relieved by treatment of the nasal ganglion. Some ganglia and vidian trunks are sensitive to substances which do not affect others. Sluder cited two cases where one was sensitive to menthol and the other to silver nitrate. These drugs, when applied locally, produced typical attacks of asthma. It must be assumed from clinical findings that the sympathetic nervous system under pathologic conditions is capable of transmitting pain impulses from the nasal ganglion to the neck shoulder, etc. This argument is contrary to most anatomists. Herrick, however, speaks of sensory fibers in the sympathetic nervous system to be dendrites of neurons that have their cell bodies in the posterior root ganglia. Buch believes that he has definitely proved that the sympathetic does transmit pain impulses under these conditions. That being as it may, the clinical evidence overwhelmingly proves that the nasal ganglion is responsible for the above-named symptoms.

When a typical picture presents itself, diagnosis is an easy matter. Post-nasal examination shows some hyperplasia of the mucous membrane near the ganglion. Often a hyperplastic condition of the sphenoid and posterior ethmoid is also present. I have seen several cases where the anterior and posterior rhinoscopic examination showed a perfectly normal nose, except that there was a small area of



intense redness on the mucous membrane over the sphenopalatine foramen. Two of these cases were of the neuralgic type and one was a typical seasonal hay-fever. Treatment effected a cure in each case. Many times, in severe cases, the soft palate is drawn to the well side upon gagging.

The differential diagnosis is based upon the following points:

1. Where this ganglion is involved, cocainization stops the symptoms at least temporarily.
2. Cocainization of the ganglion does not stop the pain due to a more central lesion.
3. Intra-sphenoidal application of cocain will often stop the symptoms when due to a lesion central to the ganglion, that is, a lesion in the sphenoidal cell.

It is needless to mention that a very careful examination should be made of all the sinuses and, of course, in a case of purulent sinusitis this should be treated first. However, in the hyperplastic variety, where no pus is seen, and the case is a definite nasal ganglion involvement, treatment of the ganglion will usually suffice.

*Treatment*—In a limited number of cases, painting the ganglion area with a silver nitrate solution will be sufficient. Occasionally, the placing of a drop of saturated solution of cocain just above the posterior tip of the middle turbinate will stop all symptoms permanently. In most cases one injection is sufficient. Sometimes, however, it is necessary to repeat it several times. Rarely over three injections are required.

I follow the technique as taught by Sluder, using the straight needle devised by him for the purpose, using one-half of the cubic centimeter of a 5 per cent solution of phenol in a 95 per cent alcohol. The needle is placed at the junction of the posterior fourth with the anterior three-fourths of the middle turbinate and pushed backward and upward until the fossa is entered.

When the ganglion is entered that patient will immediately have considerable pain along its distribution. This may last from a few hours to a few days, or a week or more. The symptoms may disappear immediately or gradually subside. They occasionally return with a coryza, but are usually not so severe and often disappear with the coryza. If they do not, another injection is indicated.

The results have, on the whole, been quite satisfactory. I believe failure is due to two principal causes. First, failure to penetrate the substance of the ganglion, and second, the co-existence of a post-ethmoidal or sphenoidal sinusitis, whose discharge serves as a constant source of irritation to the ganglion. Beck reports one hundred cases of hay-fever, with eighty favorable results. Sluder has almost uniform success.

As to permanent bad results, Sluder states that, in over 1500 injections, he has had no permanent bad results. He reports severe hemorrhage in four cases, which he had no difficulty in controlling. Holmes reports one very alarming hemorrhage. I have had two patients who have had dilatation of one pupil with blurred vision immediately after injection, but which cleared up in three weeks. In one patient

there was considerable swelling of the soft tissue about the orbit which disappeared in five days.

A few case reports will illustrate some of the various forms of this disease.

**CASE 1**—Mrs. S. C., age 31, consulted me on May 31, 1923. She complained of frontal headache, burning, itching of eyes, and spells of sneezing. These symptoms had been going on for several years. They were present all of the year, but were worse in late summer and during the fall hay-fever season. Examination of the nose and throat were negative, except for a slight hyperplasia of the plica septa and sphenoid region. Both nasal ganglia were cocainized. The patient immediately developed a typical attack of cocain poisoning. June 7 she returned, saying that the symptoms had disappeared for three days after the last visit. Both nasal ganglia were wiped quickly with a saturated solution of cocain, with the hope that this would alleviate the symptoms with a small amount of absorption, but another attack of cocain poisoning followed. July 16 both nasal ganglia were injected under nitrous oxide anesthesia. Immediately after regaining consciousness the patient had severe pain in her right eye and the entire right side of the face. The pain was present in the left side of the face, but not so severe. After fifteen minutes this wore off and was replaced with severe pain in all of the upper teeth. The patient returned July 18, reporting that symptoms were practically gone. On September 1 the patient stated that she had been free from symptoms since the last visit.

**CASE 2**—Mr. L. M., minister, age 40, consulted me December 10, 1922, complaining that he had had severe frontal headaches for the past two years. For the last twelve years he had had hay-fever each spring. Examination showed deflection of nasal septum, simple chronic laryngitis, low-grade bilateral post-ethmoiditis and sphenoiditis. Local treatment was given for these conditions. December 21, 1922, the right nasal ganglion was cocainized, with very little relief. The patient was advised to have right posterior ethmoid and sphenoid opened. Patient refused. He was next seen May 12, 1923. He reported very little improvement in his headaches and was beginning to have a few mild attacks of hay-fever. Both nasal ganglia were injected. There was considerable reaction, with pain over the right eye which lasted two weeks. September 11 patient reported he had been entirely relieved from headache since injection, and also that he had had no hay-fever that season.

**CASE 3**—Mrs. M. M., housewife, age 32, consulted me December 4, 1922, complaining that for the last twenty years she had had almost constant discharge from her nose which was worse in bad weather, but was present in all seasons. It had been much worse for the past three years. The discharge was so profuse that the patient used eighteen handkerchiefs the day before. Her eyes were red and swollen, appetite poor. She was unable to do her housework and felt weak and tired all the time. I was unable to make a satisfactory examination, due to the irritability of the patient. Both nasal ganglia were cocainized December 1. The patient reported considerable improvement, but still had some sneezing. The discharge had become tenacious and her appetite had improved. Cocainization was repeated December 9. Patient reported as much better, had very little pain over right eye, had sneezed once since last visit and had been able to do her housework, the first time in twenty years. January 16, 1923, at 2 p. m., both nasal ganglia were injected under local anesthesia. There was considerable reaction at time of injection which remained until 8 o'clock that evening. September 14 patient reported that she had had no pain and only a few slight attacks of sneezing since injection, and was doing all her housework without difficulty.

**CASE 4**—Sister S., age 40, consulted Dr. H. March 11, 1922, complaining of severe right-sided headache, which had been present for the past twelve years. Pain radiated from the right mastoid to right side of neck. This pain was present most of the time, but at times became so severe that she was forced to go to bed, and opiates failed to relieve. She would be nauseated at this time. She always had a sense of stiffness in the right side of her neck and in right shoulder. His examination at that

time showed anterior ethmoiditis and hypertrophy of the right middle turbinate. She was treated on the average of twice a week for over a year. I saw her first April 28, 1923. Examination, both anterior and posterior, at this time showed absence of any inflammation in the nose, but as the inflammation had subsided, the pain seemed to increase. April 30 the right nasal ganglion was injected. There was very little reaction, and I considered it doubtful if I had entered the ganglion. However, she was entirely free from pain until August 8, when she had a mild return of some of the pain. August 20 the injection was repeated. This time the patient had a marked reaction with blurred vision, swelling of the right side of face, severe pain over mastoid and in right ear. These symptoms gradually subsided. August 30 she reported that she was free from pain. I last heard from her September 15, when she stated that she had not had a return of pain.

CASE 5—Miss R. M., age 25, consulted me, stating that three years previous to this time she had had typical attacks of hay-fever through the fall season. The next summer she had spent in the mountains and had been practically free from attacks. She stated that she had had it almost constantly for two weeks previous to her coming to me. Examination showed sphenoid areas unusually moist, with very little hyperplasia. There was a very definite area of redness posterior to and above the posterior tip of the middle turbinate that is over the sphenopalatine foramen, more marked on the left side. Both nasal ganglia were cocaineized with complete relief, which lasted two days. August 20 both nasal ganglia were injected. The patient had considerable pain in her head and face for twenty-four hours after injection. September 15 she reported that she had had no return of hay-fever.

Case 1 shows the typical secretory type, the symptoms, although present all of the year, were definitely worse during the hay-fever season. It shows that this injection can be done under a general anesthetic.

Case 2 is a mixed neuralgic and secretory type. It is interesting to note that the injection was made at the beginning of the season, and the patient was entirely free from symptoms during the season.

Case 3 is a pure secretory type, with no relation to season.

Case 4 is a rather typical case of the neuralgic type, without any of the secretory phenomena.

Case 5 is a typical case of seasonal hay-fever.

Pains from various other sources have been reported as having been controlled through the nasal ganglion. Among these are pain from corneal ulcer, glaucoma, carious teeth, wounds of the jaw, otitis externa, carcinoma of the larynx.

I have recently seen four cases of extremely painful tuberculous laryngitis, in each of which I was able to stop the pain by cocaineization of this ganglion. One application relieved the pain for from one to two weeks. All of the patients were so ill with pulmonary tuberculosis that I thought injection was inadvisable. However, they were all able to take nourishment after the treatment, which had been impossible before, due to the intense pain it occasioned.

I realize that this small number of cases is not sufficient to draw any conclusions, but am mentioning it with the hope that others will try it on this disease, and that it may be of benefit in controlling the pain in this condition.

315 Westlake Professional Building.

## DISCUSSION

PHILIP C. MEANS, M.D. (San Marcos Building, Santa Barbara, California) — The seeming inconsistency that this small ganglion can be the seat of so much and such diverse disorders is a recurring source of amazement. It is not strange that there was some incredulity when the results of Sluder's extensive studies were published. And today it seems as if the simplicity of it was the cause of many of us overlooking cases of this type. Otherwise I believe we would find more suitable to this treatment, when Sluder reports hundreds, and more than 1500 injections.

The variations in the nerve and fossa undoubtedly account for many failures. It is not an easy thing to place the injection where we know it should be. Smith in his "Block Anesthesia" advises injection by the oral route as being easier and more exact, but it would seem as if one would be more likely to put the alcohol about the nerve than into the ganglion. I notice in the literature one man in Germany who has used this method in a case of glaucoma with satisfactory results.

Dr. Gundrum's paper covers the subject very thoroughly and will no doubt bear fruit in a more careful watch for this interesting syndrome.

J. A. BACHER, M.D. (Lane Hospital, San Francisco) — Sluder follows Piersoll in anatomical details of the sphenopalatine ganglion, from which Gundrum diverges in several important details: (1) The ascending branches also pass to the "periosteum of the orbit." (2) *a*. The large posterior palatine is distributed to the mucous membrane of the hard palate, inner side of gum and "to mucous membrane of all but anterior portion of the inferior turbinate bone and to adjoining portions of middle and inferior meatuses." *b*. The author has designated this branch external when he has meant to call it the small posterior palatine. *c*. Accessory posterior palatine is preferable to external. (3) Internal—*a*. The posterior superior nasal (upper nasal of author) does not supply posterior part of septum or lining of posterior ethmoid. *b*. The naso-palatine also to "roof and septum of nose." (4) It is incorrect to class the Vidian as a branch of the ganglion; it is one of the two roots of the ganglion. This relationship to the ganglion is the basis for the point in differential diagnosis, mentioned later in the article.

From Sluder's point of view, Gray's description of the sphenomaxillary fossa as detailed by Gundrum is not the most instructive as Sluder himself gives it, and then criticizes it as dwelling too much on osseous structures rather than on their contained sinuses. The fossa is never bounded anteriorly by the anterior ethmoidal cells, as Gundrum describes it. Sluder says: "Anteriorly, the fossa is formed by the posterior superior wall of the maxillary sinus; but the ganglion can never lie in close relationship to this wall because of the pad formed by the arteria palatina descendens, arteria and sphenopalatina and their accompanying veins and surrounding connective tissue. The sphenoidal sinus may in unusual cases extend anterior to the fossa, or the wall of the nose may curve so sharply outward as to form a part of the anterior boundary of the fossa." Sluder does not describe the soft palate as "drawn to the affected side on gagging." He says: "The arch of the soft palate is higher on the affected side; the uvula and dimple which forms above it on gagging are deflected to the well side." The chorda tympani supplies the anterior two-thirds, not half, of the tongue. Sluder's advice in the 1918 edition of his book is to enter the point of the needle 2 mm. anterior to the posterior tip of the middle turbinate.

It seems to me to be an extremely difficult matter to see "a small area of intense redness on the mucous membrane over the sphenopalatine ganglion" in a nasopharyngeal mirror.

The sphenopalatine ganglion is very important in the consideration of pain over the distribution of its sensory fibers. Cocaine applied locally over the mucosa covering the ganglion helps greatly, and is advantageous also in anesthesia for certain intra-nasal operations. Injections into the nerve or ganglion block pain impulses by nerve destruction. The nerves so destroyed should regenerate in twelve to eighteen months and pain return if cause has not been removed. I believe that Sluder has exaggerated the number of localities in which pain can be



controlled by injection of the ganglion. On the sympathetic root side of the question, I believe that, in the treatment of vasomotor manifestations in the nose, attention should be directed not to the secondary neuritis, but to its primary focal etiological factor, be it in tonsils, teeth, sinuses, prostate, or elsewhere. Or if neuritis be not due to focal infection, research should be stimulated to find its cause and not be deadened by a false sense of the problem's being solved by treating a symptom.

GEORGE H. KRESS, M. D. (245 Bradbury Building, Los Angeles).—The sphenopalatine ganglion and nerves are intricate, not only in their anatomy and physiology, but likewise in their pathology. The large number of symptoms enumerated by the essayist in conditions where Meckel's ganglion is involved may be taken as a good indication of this. These symptoms, many of them, are so distressing that the patient is willing to try almost anything for relief, and there can be but little doubt, from the researches of Sluder and others, that very excellent results are not infrequently obtained through the injection of the pheno-alcohol, after the Sluder method, and as advocated by the essayist.

I am inclined to think, however, that the use of some of the milder procedures which Sluder and others have tried out, such as placing local applications to the mucous membrane over the ganglion are worth a preliminary try-out before resorting to the alcohol injection.

At times the response to such local applications and packs, with say 10 per cent argyrol and other solutions, is very gratifying and seemingly quite as effective as the alcohol injections, without any of the danger or distress that is sometimes incident to the use of an alcohol injection.

Gundrum covers the whole subject matter in very excellent form, and his presentation of the underlying anatomical and surgical principles and his case reports will no doubt lead us all to keep this type of procedure more in mind when nasal disturbances that are related or dependent upon derangement of Meckel's ganglion come to our personal attention.

DOCTOR GUNDRUM (closing).—The anatomical description has been taken solely from Quains' Anatomy, Vol. III, Part II, and is in no way original.

It is not at all difficult to see a small area of intense redness on the mucous membrane over the sphenopalatine foramen if one is accustomed to making post-nasal examinations with a good light. I recently saw a patient that Sluder had injected ten years previous. Up to the present time her symptoms have not returned.

Most of the patients that I have injected for "hay-fever," asthma and vasomotor rhinitis have had sensitization tests. One woman had had four hundred tests. Many have had all of their sinuses opened, teeth extracted, tonsils removed, and the symptoms still persisted.

Before considering injection I examine carefully for a focus of infection. I have seen several patients with an infected sphenoid whose symptoms would disappear temporarily by cocaineization of the nasal ganglion. In some cases the symptoms were relieved completely by opening the sphenoid. In one case the sphenoid drained freely, but the pain persisted. Injection of the nasal ganglion stopped all symptoms.

"Medical people and hygienists must always have some curative or preventive which they laud without sense or reason," says the Medical Journal and Record editorially. "Of late it was vitamins which were given undue recognizance, and at present light is in the lime-light. Always it is some condition the importance of which was known to our lower (?) animal friends for ages, and neglected by man only, which is now hailed as a lost and only factor for health."

"Possibly one may be dogmatic about an abstract scientific conclusion, but human variability makes dogmatism with reference to human beings a difficult, unsafe, and unscientific procedure."—(Ed. Am. Med.)

About the only way for a king to get on the first page now is to be dead four thousand years.—Publishers Syndicate.

## THE ROLE OF CESAREAN SECTION IN THE TREATMENT OF ECLAMPSIA

By JOHN C. IRWIN,\* M. D., Los Angeles

*The literature on Cesarean section in eclampsia is voluminous, but consists principally of reports on a few cases, generally less than five. Very few authorities have had a large series of personal cases. The British symposium of 1922 is the most comprehensive.*

*Statistics on mortality following the operation vary from 9.5 to 60 per cent in series of ten or more cases.*

*The mortality rate following Cesarean section is very unfavorable when compared to that of the so-called conservative treatment.*

*Cesarean section has a very limited field in the treatment of eclampsia. It is probably indicated only in the case of well advanced pregnancy, with the absence of cervical dilatation and previous attempts at delivery in which there has been no improvement after a few hours of sedation and elimination treatment. It is indicated, of course, in co-existing abnormalities, such as contracted pelvis.*

*The operation probably has a larger field of usefulness in the case of pre-eclamptic toxemia, in whom toxic symptoms increase in spite of elimination and other medical treatment.*

*The abdominal hysterotomy should be used, when indicated, in cases at or very near term, and the vaginal hysterotomy in the cases before the seventh month of gestation. The low cervical operation is hardly indicated because it is not applicable in cases before labor is well advanced, and Cesarean section is not indicated in the eclamptic well advanced in labor, unless there is pelvic contraction, or other co-existing indication.*

*In the series of 118 eclampsias reported here, the mortality rates correspond fairly well with the other larger series. Twenty-one Cesarean sections, with a mortality rate of 43 per cent, is unfavorable for the operation.*

*Conservative methods of treatment, particularly the Dublin and Stroganoff methods, offer the best results so far reported.*

*The new treatment of eclampsia with magnesium sulphate intravenously is very promising, and the staffs of the three hospitals, herein mentioned, are enthusiastic about the results obtained, both in eclampsia and toxemia of pregnancy.*

DISCUSSION by E. M. Lazard, Los Angeles; John Truwind, Los Angeles.

DURING the past thirty years the idea has quite generally prevailed that since gestation is the cause of toxemia, immediate termination of pregnancy is desirable if eclampsia cases are to be treated successfully. Halbertsma first suggested Cesarean section for certain cases of eclampsia in 1889, and Duhrssen in the early nineties proposed the vaginal hysterotomy for the same condition. This idea is still held by some obstetricians of large experience. Some, however, have always contended that only the more conservative methods of termination of pregnancy should be employed. I believe this contention is now supported by an increasing percentage of authorities as more experience is gained and more statistics are available.

During the past twenty-five years Cesarean section has been used very extensively, both in this country and abroad. Its popularity has probably been due partly to the fact that this method is more

\*John C. Irwin (1006 Union Bank Building, Los Angeles), M. D. Indiana University School of Medicine in 1910. Hospital connections: Los Angeles General Hospital, Methodist Hospital, and Hollywood Hospital; formerly House Surgeon at New York Lying-in Hospital, Woman's Hospital of New York; Magee Hospital for Women, Pittsburgh; Assistant Professor of Obstetrics, University of Pittsburgh, 1913-1916; and University of Southern California, 1916-1921; Captain, Medical Corps, U. S. Army, World War. Practice limited to Obstetrics and Gynecology.

spectacular, and is easier and quicker than are the conservative methods. Its use is more prevalent among general surgeons than among obstetricians both on account of their surgical training and their lack of appreciation of the danger of eclampsia; they are called upon rarely to deal with this most dangerous complication of pregnancy. The obstetrician, on the other hand, is coming in contact with eclampsia frequently, and realizes more fully that he has to deal with a condition that is as much medical as surgical, if not more so.

Review of the literature reveals surprisingly few large series of cases operated upon by any one surgeon. In at least 90 per cent of the cases the reports are of less than five cases, and generally of only one or two. Each individual has had all too few personal cases to enable him to form an authoritative opinion on the merits of the procedure. This situation is in direct contrast to that of the many surgeons who can report one or two hundred gall-bladder or appendix operations, and are entitled to an opinion based on wide personal experience. Since collective medicine exceeds in value the ideas of the individual, one must add to a personal study of cases a review of the literature available, in order to draw any conclusions on the subject. This I have attempted in this paper.

The first report of a large series of cases was made in 1914 by R. Peterson, who listed 500 Cesareans in eclampsia by 259 different operators. His cases are divided chronologically into 198 cases operated before 1908, and 283 cases operated in the five-year period from 1908 to 1913, and show a mortality rate of 48 per cent and 26 per cent, respectively, and a total mortality rate of 35 per cent for the 500 cases. He selects certain groups of cases to prove his contention that there is a considerable field for the operation. In one group of ninety-one operations performed by thirteen men, having five or more cases to their credit, the mortality was only 18.68 per cent. If we deduct 15 cases where the proportion of moribund and septic cases was very high, the remaining 76 cases gave a mortality of 13.15 per cent. In another group of 60 cases where the operation was performed after one to five convulsions and after only one or two vaginal examinations had been made, and no attempt had been made to deliver from below, the mortality was 15 per cent. In his series, 84 per cent were primigravida and 16 per cent multigravida; the primigravida probably presented undilated and rigid cervix and soft parts, which more often called for the abdominal section. Peterson argued that the operation had not been given a fair trial, as it was performed soon after the first convulsion, and said that the method could no longer be disregarded by obstetricians, who had based their opposition to the procedure upon altogether too high mortality statistics.

A series of 14 cases with 14 per cent mortality reported by B. C. Hirst; another of 174 collected cases with 16.1 per cent mortality reported by Brodhead, and a third of 21 cases with 9.5 per cent mortality by Park, all sound complimentary to the procedure. But when one reads a recent report by Ingraham of 19 collected cases from the hospitals of

Denver with a mortality of 57.9 per cent, one has to consider very seriously the advisability of its use.

The most comprehensive report with the largest series of cases published in recent years was the one made in a symposium before the British Congress of Obstetrics and Gynecology on June 29, 1922. This report details the investigation of 2005 cases of eclampsia occurring in the British Isles from 1911 to 1921. The gross mortality of the series was 22.5 per cent. Eden, at this symposium, calculated that about 600 women die of eclampsia annually in the British Isles. If this represents the gross mortality of the disease, then there are about 2600 cases of eclampsia in the British Isles annually among a population of 47,157,749, with an incidence of one case of eclampsia in every 380 births.

As the results of treatment depend upon the severity of the case, the British were led to the conclusion that the following seven phenomena are signs of danger: coma, a pulse rate over 120, a temperature above 103 degrees, a number of fits greater than ten, a urine which becomes solid on boiling, the absence of edema, and a blood pressure over 200. If a patient exhibited any two of the above phenomena, the case was listed as "severe"; if not, the case was listed as "mild." Four hundred and twenty-five patients who had been delivered, with various percentages of mortality, were grouped under this classification, as indicated in the following table:

	"Mild"		"Severe"		Total	
	Cases	Mortality	Cases	Mortality	Cases	Mortality
Normal delivery.....	50	6.0%	39	20.5%	89	12.3%
Induction of labor.....	59	5.1%	24	20.8%	83	9.6%
Assisted labor.....	100	5.0%	51	33.3%	151	14.5%
Cesarean section.....	51	9.8%	37	43.2%	88	23.8%
Accouchement forcé	4	25.0%	10	60.0%	14	50.0%

Attention to these statistics shows that accouchement forcé is not to be considered in delivery, that in the mild cases Cesarean section doubles the mortality, and that in severe cases it increases the mortality by more than a third. This report shows that foetal mortality is considerably lower in Cesarean section than in all other methods of delivery excepting normal delivery, with which it compares very favorably.

A recent study by Wilson of the eclampsia cases treated at Johns Hopkins Hospital is very enlightening. His series is divided chronologically into 110 cases treated from 1894 to 1912, and 137 cases treated from 1912 to 1924. The first group was treated by immediate delivery by various methods, which included many major obstetrical operations, while the second group was treated conservatively. His report shows that the maternal mortality in mild cases has been reduced from 14.2 to 2.3 per cent, and that in severe cases from 38.8 to 19.4 per cent by use of conservative methods.

Solomon's report of treatment by the Dublin method shows a mortality of 10.29 per cent in 204 cases treated in Rotunda from 1903 to 1922. A compilation of 343 cases treated by a certain number of obstetricians using the Stroganof and other expectant forms of treatment shows a mortality rate of 12 per cent, while another series of 2208 cases treated by the Stroganof methods gives 9.8 per cent. Stroganof in 230 personal cases had a mortality of



TABLE NO. 1

## ECLAMPSIAS

Ante-partum and Intra-partum Cases	At L. A. Gen. Hospital			At Private Hospitals			Total of Series		
	Cases	Died	Mort. %	Cases	Died	Mort. %	Cases	Died	Mort. % for Method
Delivered by Cesarean section.....	15	7	47	6	2	33	21	9	43
Delivered by accouchement forcé.....	9	4	44	3	0	0	12	4	33
Delivered spontaneously or by less radical means	41	12	29	9	2	20	50	14	15
Not delivered (moribund).....	8	6	75	1	1	100	9	7	77
Post-partum cases.....	18	4	22	8	0	0	26	4	15
Totals.....	91	33	36	27	5	18	118	38	32 for P. P. cases for series

1.7 per cent, but his series may have included also pre-eclamptic toxemias.

These mortality rates, when compared with those reported from various forms of operations, discourage one in the use of any of the major operative procedures.

I have reviewed the records of the Los Angeles General Hospital and the Methodist Hospital of Southern California for a period covering the past five years, and those of the new Hollywood Hospital covering a period of ten months. I have also included four personal cases treated in other private hospitals during the past five years. I am indebted to the obstetrical staffs of these institutions for allowing me to use their case records for this report.

The series includes 118 eclampsias and 80 pre-eclamptic toxemias. At the Los Angeles General Hospital were 91 eclampsias and 34 toxemias, and in the private hospitals 27 eclampsias and 46 toxemias. The eclampsias include only those patients who had convulsions. I believe that many of the toxemia cases might have been classified as eclampsias, but since there must be an arbitrary division, the presence or absence of convulsions should determine the classification of a case.

It is very evident, and I think significant, that the majority of private patients are brought to the hospital for treatment before reaching the eclampsia stage, or while still pre-eclamptic toxemias. On the other hand, the charity cases, having little or no medical supervision, are well advanced in their toxemia or are eclampsias on admission.

I have not classified these cases as "mild" or "severe" according to the English classification. As a member of the obstetrical staff at the Los Angeles General Hospital, I have observed a considerable number of the cases here reported, and I am sure that three-fourths of them exhibited two of the seven danger symptoms, and can be classed as "severe." It will be seen that the mortality rate of 36 per cent for the General Hospital is quite high, compared with one of 18 per cent in the private hospitals. This obtains, I am sure, because the charity cases come from all over Los Angeles County, and are "severe" as a result of gross neglect of the poorer classes in seeking prenatal care. A large percentage of the General Hospital eclampsias have been under the care of midwives. Many of them are admitted after several hours of coma or convulsions and, in many, attempts at delivery have been made at home before sending the patient to the hos-

pital. The charity cases are much more severe than the cases from private hospitals.

In this series of 118 eclampsias, Cesarean section has been performed in twenty-one cases, or in one out of every six cases treated. The ratio is about one in four and a half in private cases, and one in six in charity cases, showing that it has been used less frequently in the more severe group.

Table No. 1 shows the number of cases treated by Cesarean section, accouchement forcé, spontaneous and assisted delivery, including induction of labor, forceps, breech and simple version. The mortality rate for each form of treatment is shown, and is the significant point of this table.

While the series is small compared with Peterson's, Brodhead's, and the British report, the mortality rate is quite constant. The rate for accouchement forcé is a bit low, but that is probably because of the small number of cases delivered by this method.

Of the nine cases not delivered, two who were treated with magnesium sulphate were allowed to go home to await labor, but were kept under careful supervision. Of the seven who succumbed a few hours after admission, one in a private hospital refused Cesarean section at the eighth month, and the others at the General Hospital were considered in too serious a condition to be subjected to operative delivery. Most of these were at the eighth month of pregnancy.

The question naturally arises, "Were not the Cesarean cases more severe than those who were delivered by other methods?" Table No. 2 will partially answer this question by giving the number of cases with percentages of total where such data was available in the records. The records of the Cesarean cases are more complete than those of the non-Cesarean ones, and this will account for some of the differences in percentages. In the moribund cases, who died soon after admission, most of the charts showed no record of urinalysis, blood pressure, and number of convulsions. About the same percentage were comatose or unconscious on admission. In fact, only .9 per cent of the Cesarean section cases were in coma, whereas 16 per cent of the non-Cesareans were. After studying the charts of the cases and seeing a large number of the ones at the General Hospital, I believe they are of about equal severity.

The Cesarean sections at the General Hospital were not done after delivery from below had been attempted, or on patients where infection was prob-

TABLE NO. 2

## ANTE-PARTUM AND INTRA-PARTUM CASES OF ECLAMPSIA

	Cesareans—21		Non-Cesareans—71	
	Cases	Pct.	Cases	Pct.
No. who had 6 or more convulsions .....	10	47	10	14
No. who had 10 or more convulsions .....	5	24	4	5
No. who had Bl. P. of 170 or more.....	10	47	21	29
No. who had Bl. P. of 200 or more.....	5	24	10	14
No. unconscious or in coma on admission.....	7	33	22	31
No. who had albumen in urine .....	18	85	42	59
No. who had casts in urine .....	12	57	28	39

ably present. The same contra-indications were probably considered in the private cases.

The mortality rate of 43 per cent in Cesarean section cases certainly does not compare very favorably with the rate of 28.8 per cent in cases treated by all other methods, including moribund cases. Four of the Cesareans in private hospitals with one death, and four of those at the General Hospital with one death, were operated by the writer—a mortality of 25 per cent in eight cases by one operator. The other thirteen cases were operated by seven different surgeons, two doing three operations each; two performing two each, and the other three one each.

In 80 cases of pre-eclamptic toxemia, 18 were delivered by Cesarean section, with two deaths, a maternal mortality of 11 per cent. The total number of deaths in the 80 cases was 5, or 6.2 per cent. Six of the 18 Cesarean sections in the toxemias were performed by the essayist with no mortality. These cases, and probably most of the others, were operated after being on elimination treatment and sedation with increasing toxic symptoms, in spite of treatment. Some of the other cases I saw in consultation and advised Cesarean section because of their failure to respond to treatment.

Much more data is available on this series of cases, but it has no direct bearing upon our subject.

I do want to digress, however, to mention a form of treatment we have been using for the past year at the Los Angeles General Hospital on all eclamptic and pre-eclamptic toxemias. This treatment was outlined, and seventeen cases were reported in detail by E. M. Lazard in an article published in the February number of the American Journal of Obstetrics and Gynecology. The treatment was suggested by Emil Bogan (an intern) and consists of the use of magnesium sulphate intravenously. To date, 32 cases of eclampsia with 7 deaths have been so treated. This is a gross mortality of 22 per cent. Of the seven deaths, one patient died twenty-three days, after delivery, of sepsis and a pelvic abscess after entirely recovering from her eclampsia. A second was admitted nine days post-partum in coma, and died three hours after admission, probably of nephritis. Another died thirteen hours after admission of acute cardiac dilatation immediately following a dose of veratrum viride, which caused a fall in blood pressure from 210/140 to 96/68; and a

fourth died twelve hours after admission, having been in coma fifteen hours before admission.

Deducting the one case as a nephritis and not an eclampsia, and another death as due to sepsis, we have 16.1 per cent mortality in cases which were evenly divided as to "mild" and "severe" in type. If one deducts the other two cases who were hopeless, we have 29 cases with 3 deaths, or a mortality of 10.3 per cent in cases in which there was some chance for recovery.

The technique in use now is to give 20 cc. of 10 per cent magnesium sulphate intravenously about every four to six hours and a saline cathartic, or simple enema. The theory of this treatment is that the convulsions and restlessness of eclampsia are due to edema of the brain. The magnesium sulphate, acting as a diuretic, removes this edema; as a sedative, it quiets the restlessness.

Five cases of severe toxemia have been treated, with resultant lowering of blood pressure, disappearance of edema, and general improvement. The diuretic effect is very evident. A private toxemia case of mine with blood pressure of 164/100, edema, and severe headache in beginning labor was given six doses in all. She voided 1700 cc. of urine in the first twelve hours, and her edema and headache disappeared before she completed her first stage; the blood pressure was below 130 throughout her lying-in period. Another post-partum eclampsia with one fit voided 2000 cc. of urine in the first twelve hours after the fit, her edema and headache disappeared in twenty-four hours, and the blood pressure remained normal after forty-eight hours. None of these patients has been given any other kind of treatment, and they are left as quiet and undisturbed as possible. No Cesarean sections have been performed for eclampsia at the General Hospital since the use of this treatment has been adopted.

1006 Union Bank Building.

## DISCUSSION

E. M. LAZARD, M.D. (2007 Wilshire Boulevard, Los Angeles).—Doctor Irwin's review of the reports from the various clinics, as well as from the Los Angeles General Hospital, shows conclusively, I believe, that Cesarean section as a treatment *per se*, of eclampsia, should be discarded. While some of the more prominent clinics report small series of cases with mortality rates varying from 9.5 to 16.1 per cent, yet when collective reports from various hospitals present mortality rates as high as 57.9 per cent, it would seem that the procedure in the hands of the average surgeon presents an almost prohibitive mortality. If, "in mild cases Cesarean section doubles the mortality, and in severe cases it increases the mortality more than a third," one is led to speculate as to whether the cases which recovered would not have recovered under more conservative treatment, and there is little doubt that the mortality would have been greatly reduced.

The results where the operation is performed for the pre-eclamptic toxemia are far better.

Since the beginning of our work with the intravenous use of magnesium sulphate in eclampsia, there has been no section done for a toxemia in the Los Angeles General Hospital. Our experience has convinced me that section in the active eclamptic is absolutely contra-indicated; and in the pre-eclamptic, or the patient who has been carried past the eclamptic crisis by medical treatment, it is only indicated where the obstetrical conditions are such as to indicate its performance, irrespective of the toxemic condition. It is true that this does not take into consideration the interests of the baby, but as these babies are frequently premature and always more or less toxic, it is a question whether the ultimate results to the babies is



any worse in the medical treatment. In this connection I am reminded of Olshausen and Veit's dictum in regard to the treatment of placenta previa. They say, "He who pays least attention to the welfare of the baby will have the happiest results in treatment of placenta previa; he will not lose an appreciably greater number of children, and will achieve results for the mother which otherwise would not be possible." This, I believe, applies with equal force to the eclamptic, so that in view of the statistics available, I believe that section has no place as a treatment, *per se*, of toxemia, either pre-eclamptic or eclamptic. It has, however, I believe, a definite, though very limited, field in the pre-eclamptic where local obstetrical conditions are such as to indicate its performance.

JOHN VRUWINK, M. D. (Pacific Mutual Building, Los Angeles)—The résumé presented by Doctor Irwin is both enlightening and disconcerting. It emphasizes the need of search for a more conservative procedure in the care of the eclamptic. It emphasizes the reason for the conservative measures advocated by the writers of current literature. It emphasizes, too, the dangerous human characteristic of jumping at conclusions. Irwin states that most series are of but few cases, far too few, for any one individual to arrive at a logical conclusion. The study is most valuable, therefore, for it presents a phase of obstetrical surgery, prompted by a misconception of etiology, which upon investigation has given consistently poor results.

The patient with convulsions is a poor surgical risk; that is proved. The patient still in the pre-eclamptic stage is a better risk. The obvious conclusion is that all patients should receive adequate care to prevent the onset of convulsions.

There is no uniform standard treatment, but there is a persistent effort to find some conservative measure to better the discouraging results of surgery. Irwin shows with rather startling definiteness what may be expected from Cesarean section.

Conservative measures give much promise and each has zealous advocates, but all are still viewed with more or less suspicion. This skepticism still obtains, regarding magnesium sulphate intravenously. The habit of care, for years, has been too much treatment. It is difficult to merely give intravenous injections of magnesium sulphate with only the mildest kind of elimination. We feel, however, that it will usually prevent and stop convulsions and that the condition of the patient is fortified so that she is better prepared for interference when interference is necessary.

It is not difficult to agree with Irwin that section has no place in the care of eclampsia. I still believe that section has a definite field of usefulness in the care of the pre-eclamptic, but only when preceded by intravenous magnesium sulphate, and in the eclamptic who has been carried over the period of convulsions, preferably by magnesium sulphate, when the patient again presents signs of an approaching eclampsia. Conservative measures will give better results, not only for mothers, but for the babies as well.

The physician's occupation has become probably the world's greatest profession; great in the number of persons devoting their lives to it; great in their intellectual attainments, high character, and the respect and admiration in which the world holds them; great in the priceless knowledge, skill and services supplied by them to relieve the suffering and sorrow of men, women and children; great in their diligence and progress in acquiring new knowledge and more skill; great in the supremacy which they have attained, and are still extending over destructive diseases; and great in their power to insure health and happiness to all mankind.

The physician is the only agency actively devoted to studying, preventing and eradicating disease, and is the chief subject for consideration by the state in making provisions for protecting the public health.—H. E. Kelly of the Chicago Bar.)

There can't be a revolution in America. Not enough people are mad about the same thing.—Birmingham News.

## INDUSTRIAL HERNIA VERSUS SEMINAL VESICULITIS AND VASITIS

By MILEY B. WESSON,\* M. D., San Francisco

*Hernia is practically always due to the presence of a preformed pouch of peritoneum which follows the testis in its descent into the scrotum and has failed to close in the normal way; it is never the result of a single strain, but is the cumulative effect of a number of strains spread over a considerable period of time. The onset is gradual and is practically never accompanied by pain.*

*Careful surgeons may disagree as to the presence of a bubonocoele, but never as to its etiology.*

*Practically one-third of all men have preformed hernial sacs, and merely because of a pain in the groin these should not be subjected to surgery, particularly if the prostate and seminal vesicles are pathological.*

*Hernia developing in the course of duty is a disease and not an injury.*

*Pain in the groin subsequent to a strain, is generally due to vasitis.*

*Epididymitis and vasitis follow a strain only when the seminal vesicles and prostate are infected.*

*The repair of a relaxed inguinal ring will not relieve pain due to a tender, inflamed spermatic cord.*

*A herniotomy in the presence of an acute vasitis is pregnant with dangers to the future virility of the testis.*

*Blood-stained ejaculation is pathognomonic of seminal vesiculitis, and does not occur with trauma or rupture.*

*Prostatitis and seminal vesiculitis are very common and occur secondarily to nonvenereal, as well as venereal infections.*

*Pus, without organisms in the urine, commonly indicates either tuberculosis of the kidney or a prostatitis.*

*Seminal vesiculitis, because of its symptoms, is commonly confused with hernia, appendicitis, sacro-iliac diseases, spondylitis, and sciatica.*

*The study is based on forty-seven cases of vasitis, most of which had been diagnosed as industrial hernia and operations advised. Twelve cases, representing the various types, are reported in brief.*

DISCUSSION by Emmet Rixford, San Francisco, Robert V. Day, Los Angeles; F. S. Dillingham, Los Angeles; H. A. Rosenkranz, Los Angeles.

### INTRODUCTION

THE development of modern industry with men employed by the thousands, and the passage of compensation laws in the various states has raised the question of the cause of hernia, of the relative importance of congenital defects, trauma and occupation as factors, and the possible lesions that cause erroneous diagnoses of hernia.

According to careful post-mortem examinations, about one-third of all men are born with a potential hernia, and many of these acquire a seminal vesiculitis. Following a strain there is a flare-up of the infection, which manifests itself as a vasitis. The first subjective symptom is a pain in the groin, which the patient too often attempts to "sell" to the insurance company as an industrial hernia. Because of the chaotic condition of the hernia problem, as indicated by the tendency of the Industrial Accident Commissions to impose upon corporations as a legal liability the responsibility for hernia, it behooves us to curb our tendency to classify as an in-

\*Miley B. Wesson (1275 Flood Building, San Francisco), M. D. Johns Hopkins University, 1910. Practice limited to urology. Appointments: House surgeon, New York Hospital, 1910-1912; assistant to Hugh H. Young, 1918 to 1921. Post-graduate work in urology, Brady Urological Institute, Johns Hopkins Hospital. Publications: Numerous.

dustrial hernia every bubonocoele or dilated inguinal ring occurring concurrently with a pain in the groin.

The subject of hernia is as old as medicine, and just as the etiology had been satisfactorily settled and the medical profession had been convinced that practically all hernae were congenital and there was no such thing as a traumatic hernia, the subject was opened anew by catapulting the question out of the field of medicine and into the realm of industrial politics. Previous to the passage of the various workmen's compensation acts, claims for damages based upon hernia were very rare; the rank malingerer or the workman who wanted some "easy money" generally had a "railroad spine." At the present time the reports of the Industrial Accident Commission show that claims for industrial hernia almost equal those of hurt backs, and if this rate of increase continues will shortly surpass them in number.

#### DEFINITION

The term "traumatic hernia" has been used to include: (1) True traumatic hernia, due to direct violence; (2) hernia of effort, which includes all of those cases in which the hernia appears during heavy lifting, slipping, falling, coughing, sneezing or any cause whatever, which increases the intra-abdominal pressure; and (3) hernia of weakness, which is due to abnormal or defective development of the abdominal wall at the various hernial sites. The first group may quickly be dismissed from consideration with the statement that Dr. W. B. Coley, after thirty-one years' experience at the Hospital for Ruptured and Crippled in New York City, where there are five thousand new admissions a year, has never seen a single case of true traumatic hernia. The third group, or "hernia of weakness" are almost as rare and, like the true traumatic hernia, are always of the direct type. Hence, compensation boards are only interested in the second group, or "hernia of effort." It is universally recognized that the all-important cause of hernia is the presence of a preformed sac, i. e., there is an open funicular process of peritoneum existing at birth, even though the hernia may not develop until adult life. The hernia, not the formation of the sac but the filling of same by pushing out some intra-abdominal structure, is never the result of a single strain or increase in intra-abdominal pressure, but the cumulative effect of a great number of strains spread over a considerable period of time, and is never accompanied by acute pain. Although this is contrary to the stereotyped teaching of many textbooks, Coley, who probably has had the widest experience of any surgeon, has never seen a single case of a recent hernia which was "tender, painful and accompanied by ecchymosis, in which there had been a history of antecedent injury or accident of any form."

During the war it was clearly demonstrated that men taken from sedentary occupations and put at manual labor developed hernia quickly because of the sudden unaccustomed strain. In a series of two hundred autopsies, where there was no history or evidence of hernia in life, Murray found sixty-eight peritoneal diverticula, in several cases there being two or more sacs. Some surgeons advocate, in all unilateral herniotomies, the exploring of the sound

side for a potential sac; Roughton in eighteen cases found it in ten. It is not at all uncommon in large surgical clinics to discover, after the operation has been completed and the sac removed, that the wrong side has been operated upon.

#### MEDICO-LEGAL ASPECTS

In the pre-compensation days it was found that a man with hernia was about 25 per cent less efficient than the man without one. Therefore, though corporations might refuse to employ men with a rupture, they became more and more liberal regarding the repair of such a condition that might occur in an old employee. Also it required less time for the surgeon to operate and cure the hernia than was consumed in legal quibbles over "who is responsible." The patient did not know he had a sac until the filling of the sac occurred; but on the other hand the company was not responsible for the anatomical defect. In other words, they repaired herniae because of a moral responsibility, but not as a legal liability. Even though the corporations had physical examinations of their men before accepting them for employment, hernia continued to occur. This merely meant that herniae were not recognized at the time of the examination. The finding of a simple uncomplicated hernia depends, to a large extent, upon the personal equation. This was indelibly impressed upon me by a story told by the late Dr. W. S. Halsted. He attended a "hernia field-day" of a famous European surgeon who boasted that he never had any recurrences. A large number of patients operated upon during the preceding year were present, and after the surgeon had examined them and found all to his satisfaction he invited the foreign visitors to also examine the cases, and they found recurrences in a large proportion of them—merely a difference of opinion as to the borderline cases.

A few years ago, the Association of American Railway Surgeons decided that "any hernia developing in the course of duty incident to the man's daily work should be treated as a disease due to special anatomical weakness on the part of the individual, for which the company is in no way responsible." The California Industrial Accident Commission went even further and promulgated the ruling that "the consensus of medical and surgical opinion runs to the effect that hernia is very rarely, in the proper sense, the result of an accidental injury; that the accident is at best no more than the occasion instead of the cause of the malady; that the origin of the difficulty is congenital and more in the nature of a disease than an injury; that every claim for compensation based upon an alleged rupture is to be viewed with suspicion." Although the ruling is widely quoted and referred to in the literature as a model of medical soundness and conservatism, the commission has practically repudiated it. They now attempt to consider each case individually, and recently they accepted, during one year, for compensation one-third of the herniae brought before them.

Unfortunately, the compensation boards have been inclined to ignore the medical opinion and, guided by the generous attitudes of certain corporations



and a mistaken consideration of moral rights, have apparently attempted to pattern after some of the sentimental European court decisions, where the judges, becoming confused in the mass of illy understood technicalities, have followed the line of least resistance and given judgment in most cases in favor of the working man. The California Industrial Accident Commission has done almost the same thing; to quote one of their officials, they have "turned a complete somersault" and now accept all cases in which it can be proved: (1) That a hernia exists; (2) a strain was experienced, and (3) the claimant told someone, generally a colleague, at the time of the strain, that he thought he was ruptured.

#### PROSTATITIS, SEMINAL VESICULITIS, AND VASITIS

The evidence indicates that the discussion of the origin of hernia is only of didactic interest, since the insurance carriers are going to have to pay for repairing practically all of them. Hence, efforts should be directed to prevent classifying and operating upon as hernia the enlarged spermatic cords that cause the painful inguinal tumors and which are due directly to vasitis and, secondarily, to seminal vesiculitis and prostatitis. Because of their intimate association the prostate, seminal vesicles and ampullae of the vas deferens are generally infected together. Prostatitis should not always be classified as a venereal disease, and is not a rare infection. On the contrary, it is so common that we feel that practically all men have, have had, or are going to have a prostatitis, with or without symptoms. This is well demonstrated by the difficulty experienced a few years ago by Dr. Hugh H. Young's pathologist when he made, for teaching purposes, microscopic sections of both the normal and pathological genito-urinary tract. With access to all of the autopsy material in Johns Hopkins Hospital, after a three years' effort to get normal adult prostate tissue, he was compelled to use that of an infant.

The etiology is often confusing. Gonococci from a urethritis often pass up and into the prostate, and there is no way of preventing this complication. On the other hand, a large number of cases of chronic prostatitis are of non-venereal origin and these can be prevented. The common infective organism is the colon bacillus from the adjacent rectum, and if the prostate is kept in a state of constant engorgement it provides a nice mass of culture media. Hence, the after effects of immoderate masturbation, sexual excesses, or an overindulgence in "petting parties" are often more troublesome than those of gonorrhea.

#### SYMPTOMS

The symptoms of seminal vesiculitis are: (1) A vicarious urethral discharge; (2) urinary disturbances; (3) sexual irregularities—premature, painful or bloody ejaculation, and (4) referred pains. The order of frequency of this last group, which is of greatest interest to the surgeon, being pain or ache in: (a) The back (lumbago); (2) in the legs or hips (sciatica) (c) suprapubic region; (d) groin; (e) scrotum, kidney, etc. They are accordingly commonly diagnosed and treated as sacro-iliac diseases, spondylitis, sciatica, hernia, appendicitis, etc.

Gynecologists have long recognized that pus tubes in the female must be ruled out before an appendicitis operation is decided upon, but many general surgeons have yet to learn that seminal vesiculitis, or "pus tubes in the male" are equally as confusing.

Under suitable conditions the infective organisms pass downward from the prostate and seminal vesicles to the epididymis by means of an anti-peristaltic movement of the vas deferens, which commences in the colliculus seminalis. The vas is very tender and prominent and can be felt along its course, as the cellular tissue around it is usually inflamed in sympathy. Consequently, one is really dealing with a funiculitis. The pain in the inguinal region is very severe and it often radiates down the inner side of the thigh.

The immediate cause of the vasitis or deferentitis may be sexual excitement. If no virulent organisms are present, such will merely cause a neuralgia of the testicles of transitory character. However, vasitis commonly follows a strain, such as lifting a heavy object; and jumping on the high steps of a moving cable car in San Francisco is a frequent exciting cause.

The workman who is subjected to an unusual strain, however slight, may notice a pain in the groin, and after a consultation with his colleague decide that he has been ruptured. Because of the tender mass (due to the inflamed spermatic cord) the patient flinches when the surgeon attempts to palpate the inguinal ring, and the examination is generally unsatisfactory. A dilated ring may or may not be found, but because of the history and tender mass the surgeon too often confirms the laborer's diagnosis. Following the operation there is a large tender testicle which the surgeon generally attributes to edema from sewing the ring too tight, but which in reality is due to an epididymitis that might have occurred if no operation had been done. However, because of the added trauma incident to the surgical transplantation of the cord, there are marked inflammatory changes which may lead to even abscess formation and resultant sterility.

This study is based on a series of forty-seven cases of vasitis seen during the past two years. Most of the cases were referred to me by insurance carriers for an "examination, report and opinion," with the statement that hernia operations had been advised. They had been diagnosed as traumatic hernia because of the history of pain in the groin following a strain and the presence of bubonocoeles or thickened tender spermatic cords which interfered with accurate palpation of the inguinal rings. The patients ranged in age from 25 to 61, the average being 39 years. Infected urine was found in 18; residual urine, secondary to median bars, in 4; pus in the prostate and seminal vesicles in 47; tender thickened vas in 47; chronic epididymitis in 30; and genital tuberculosis in 3. Only twenty-one admitted a history of venereal diseases, and this is relatively a high figure, as all employes who have had experience with the old-time "company doctor" routinely deny venereal infection, since they believe that, whenever possible, the doctor will "pronounce" the ailment as a sequellae of such. In the past this may have been true, as the contract surgeon's retainer

was meager and the position was used merely to build a private practice—venereal diseases and obstetrics being extra.

#### CASE REPORTS

The following brief case reports of vasitis are given because they are typical of the series. In all of the cases herniotomies had been advised for the relief of the inguinal pain, and in the one operated upon there was no relief of the symptoms. Had the cases of genital tuberculosis been accepted, they would undoubtedly have proven to be very expensive "herniae."

**CASE 1**—A 27-year-old married man complained of a pain in the right groin. The prostate was large, boggy, and so exquisitely tender on deep palpation as to cause the patient to cry out with pain, and be followed by a marked priapism. He stated that it felt as if a streak of fire started from the palpating finger, passed around the brim of the pelvis and down into the scrotum and reproduced the hernia pain. The expressed secretion contained masses of pus and cocci. The inguinal rings would admit only the tip of one finger.

**CASE 2**—A 42-year-old man complained of a swelling in his left groin and scrotum, which occurred immediately after falling downstairs, a distance of eight steps. There was a history of gonorrhea ten years before and previous attacks of marked frequency and urgency. The urine contained tubercle bacilli; the prostate and left seminal vesicle were tuberculous; there was a left epididymitis and thick, tender left spermatic cord; a bilateral small direct hernia, left bubonocoele and right dilated inguinal ring.

**CASE 3**—A 60-year-old man complained of a swollen, painful testicle and a left inguinal hernia, for which he had drawn a pension for twenty-five years as a Spanish War veteran. Nycturia—1x; urine contained bacilli; large, boggy prostate contained 100 per cent pus; thick indurated, tender left spermatic cord, and inguinal rings would barely admit the tip of the finger.

**CASE 4**—A 21-year-old single man complained of right hernia and swollen, painful testicle. He gave a history of frequent erections, and though rarely indulging in intercourse because of a fear of contracting gonorrhea, practiced masturbation daily. The prostate was large and boggy, and the seminal vesicles simulated wienerwurst in shape and size. A urethral smear contained bacilli; the urine was filled with both bacilli and motile spermatozoa; and the expressed prostatic secretion contained clumps of pus and bacilli.

**CASE 5**—A 45-year-old man stated that he had a pain in the groin, extending down the inner side of the right thigh, which followed the strain of prolonged standing on his tip-toes while attempting to place a heavy piece of timber on a scaffold. The urine contained bacilli. Both inguinal rings were dilated; right vas was large and tender; and the prostate and seminal vesicles were enlarged and the secretion contained clumps of pus.

**CASE 6**—A 50-year-old man, while loading a truck, slipped and experienced a sharp pain in his left groin, extending to his back. There was a history of nycturia—2x, urgency, and weakened sexual powers. The prostate and seminal vesicles were bound down by adhesions, and on deep palpation indurated nodules could be felt; the secretion contained clumps of pus. The urine contained pus, but no organisms; there was a bilateral chronic epididymitis; and a tender, thickened left vas and a left bubonocoele.

**CASE 7**—A 21-year-old boy had been unable to work for two months because of a pain in the right groin, which followed a "strain." He had a small left varicocele, a thickened right spermatic cord and epididymis. When first seen it was impossible to palpate the right ring because of the tender cord, and the mass caused a bulging that had been diagnosed as hernia. The urine, as well as the prostate and vesicle, contained pus and bacilli, and by palpating the right vesicle a sharp pain could be made to dart around the brim of the pelvis and down into the scrotum, reproducing the identical original hernia pain. With the

subsidence of the vasitis, a definite hernia could be palpated. After the seminal vesiculitis had been cured by appropriate treatment, a herniotomy was done.

**CASE 8**—A 55-year-old hotel clerk complained of a pain in the left groin, occurring thirty hours after lifting a heavy trunk. He had an infected urine, a large tender prostate and seminal vesicles, the secretion from which contained pus; an acute left epididymitis and hydrocele of the left cord; upon palpation of the prostate pain radiated around the brim of the pelvis and down to the left testicle. The inguinal rings would barely admit the tip of a finger. Immediate herniotomy had been advised. All pain disappeared with appropriate treatment.

**CASE 9**—A 49-year-old laborer complained of a left hernia from a strain received on February 28. The pain extended from the lumbar region, around the brim of the pelvis to the left groin; a herniotomy was done on March 24 and a very small bubonocoele found. On May 11, the original pain was worse than before operation, and it was found that he had a large tender prostate and seminal vesicles, filled with pus. With the clearing up of the infection, the "hernia pain" disappeared and he returned to work.

**CASE 10**—A 37-year-old carpenter tripped and fell backward while helping move a heavy platform at Yosemite Valley. A tentative diagnosis of "strained ligament" of the left groin was made. Since the pain in the groin persisted, he came to the city and consulted a surgeon, who advised a herniotomy. He had gonorrhea in 1911, and an internal urethrotomy two years later. Several months ago, he was operated upon for a rectal fistula. Examination disclosed eight urethral strictures, tuberculosis of the left seminal vesicle, vas, and epididymis. The urine was syrupy in consistency, contained masses of pus and acid fast bacilli; both inguinal rings were tight.

**CASE 11**—A 34-year-old woodsman, while straining on a peavy to turn a log, felt a pain in his left groin, and on the following day developed a painful, swollen testicle. There was tuberculosis of the left seminal vesicle, vas, and epididymis. The inguinal rings were tight. Eventually, he disclosed the fact that, seven years before, a left nephrectomy for tuberculosis had been done at the Mayo Clinic.

**CASE 12**—A 32-year-old dairyman had a cow step on the right groin. Because of the pain and swelling, a hernia was diagnosed and an immediate operation advised. A gonorrheal urethritis was present, as well as a right epididymitis, vasitis, a chronic prostatitis and seminal vesiculitis. Both inguinal rings were tight. The presence of diabetes might have caused complications if a herniotomy had been done.

#### CONCLUSIONS

When a united medical profession will accept the definition of traumatic hernia originally promulgated by the California Industrial Accident Commission and will then convince our legal brothers and labor leaders of the wisdom of accepting medical facts instead of industrial theories, one of the greatest abuses of the compensation law will have been remedied. As soon as hernia is eliminated from consideration as a cause of acute pain in the groin and testicle, diagnosis of vasitis will become comparatively common.

Sir William Osler taught that when in doubt as to any diagnosis, never to fail to make a rectal examination. If this injunction be followed, and if the finger used be a long one, many a tentative diagnosis of industrial hernia will be changed to male pus tubes and their sequellae.

1275 Flood Building.

#### DISCUSSION

EMMET RIXFORD, M. D. (1795 California Street, San Francisco)—Doctor Wesson has pretty definitely established his thesis that seminal vesiculitis, or rather its consequence, vasitis or funiculitis, is sometimes con-



founded with hernia. I doubt, however, if this error is as frequently made as one would gather from the paper. It seems to me extraordinary that Wesson should have seen forty seven instances in industrial accident cases. As a general surgeon I see many hernias, but few cases of vesiculitis. The difference, perhaps, is a matter of point of view.

The conclusion is, of course, just that a man should not be subjected to an operation for hernia, if the pain in the groin, which has come on following some more or less definite strain is due to funiculitis, but I am not so clear that hernia does not sometimes cause tenderness about the spermatic cord. I am a little surprised at the quoted statement of Coley that he has never seen tenderness in the inguinal region caused by hernia. Personally, I have seen tenderness of the cord caused by too strong pressure of a truss; also tenderness in this region in the presence of advancing hernia, which would seem to be accounted for by distension of the fascia propria of the cord, and I have known of a testicle to be swollen because of compression of the veins of the cord from the same cause. I have seen one case, that of a dentist in San Francisco, who had sudden pain at the site of an old hernia following a dive into a swimming tank, his truss having been laid aside. In this case there was, doubtless, beginning strangulation, but tenderness remained some days after the reduction of the hernia.

The hernia problem is not a simple one when viewed from almost any angle. Certainly, it is not simple in its industrial accident relations. The German dictum, rating as compensable only those hernias which on operation showed evidences of hematoma, would seem to be unduly severe and unfair to the injured workman, for, in spite of the commonly accepted doctrine that hernias occur gradually, we see cases every now and then in which the protrusion has occurred suddenly as the result of straining. For example, a farmer boy of about 20 years of age was plowing, when the plow-share struck a root, throwing the boy into the air. He had a sudden and very severe pain in the right groin, and only with the greatest of effort was able to get to his house. Examination showed a large hernia, which was reduced without difficulty, extending well down into the upper part of the scrotum. He stoutly maintained that there had been no protrusion before this time, and since the boy was one of the proprietors of the farm, there was no industrial accident relation to modify his statement. When seen by me a day or two later the tissues of the canal were still quite tender. Operation showed no hematoma or other evidence of tearing of the sac, but the sac, which was quite thin, communicated with the tunica vaginalis. In other words, the processus vaginalis had never closed. The condition was one of commonly called congenital hernia, and in my mind there was no question that the sudden severe strain caused the intestine to open up this pre-existing sac.

In further confirmation of the fact that slight trauma, in the sense of increased intra-abdominal pressure will open up a pre-existing sac, I have had personally the following somewhat extraordinary experience. Operating for appendicitis, and being interested in hernia, I passed my finger through the McBurney incision and explored the internal inguinal ring in a certain case. I found just lateral, and above the deep epigastric artery, a funnel-shaped depression. With the least imaginable force I explored this funnel with my finger, and was startled to find that the finger passed down through the whole length of the inguinal canal. Here I had produced a hernia. Since it is not good surgery to repair a hernia after removing the appendix, I proceeded to repair the hernia and removed the appendix subsequently.

ROBERT V. DAY, M. D. (Detwiler Building, Los Angeles).—Like Doctor Wesson, I have examined a considerable number of patients coming for examination as industrial accident cases and claiming traumatic hernia. Practically all these patients had an inflammation of the vas and sometimes a swollen infiltrated cord, with a concomitant prostatitis and seminal vesiculitis. The majority showed no evidence of gonorrheal infection, either active or latent. Doubtless, however, in many cases this infection was post-gonorrheal—perhaps of many years' standing. It is a notable fact that widespread subjective symp-

toms are the result of seminal vesiculitis, especially indefinite pains radiating over a considerable area and in several directions and producing a psychic effect on the patient, out of all proportion to the amount of pathology present. His psychasthenic state sometimes helps him believe he has a lot of things he hasn't and magnify the ones he has.

Doctor Wesson states the immediate cause of vesiculitis is usually sexual excitement or a strain such as lifting a heavy object. This has certainly been my experience, although the sexual excitement is often denied by the patient, only in some instances to be admitted later. Herniotomy on these patients is not only unnecessary, but is fraught with the danger of epididymitis and funiculitis, besides incapacitating the patient for a considerable time, with the likelihood of permanent damage to the genitalia on the side operated upon. The question of sexual excitement is an important one, because man is the only animal that does not observe sexual restraint at times when propagation of the species is not the unconscious objective. The wonder is that even more pathology than obtains in the average human being does not ensue. When we consider that such a large proportion of women have displacements and leucorrhea, and that such a large percentage of the men on the street are afflicted with a more or less latent prostatitis and perhaps seminal vesiculitis, a condition which goes with civilization, then we are prepared to believe the statements of Doctors Young and Wesson that it is very difficult to obtain normal prostatic tissue except in the infant. Doctor Wesson's reference to the teaching of Sir William Osler "never to fail to make a rectal examination when in doubt" does not go quite far enough. Palpation of the prostate and vesicles may reveal nothing abnormal; but unless the prostatic juice and sperm are immediately examined as a wet mount under a high-powered microscope, many cases of prostatitis and vesiculitis will be overlooked when the prostatic juice and sperm may show a large percentage of pus, and hence subject the patient to a chance of developing vasitis and funiculitis following sexual excitement or strain. Of course, if there is pus there must be infection; but it is often difficult to determine the causative organism. In only one instance in Doctor Wesson's paper do I disagree with him, namely, that the causative organism is usually the colon bacillus. Finding colon bacilli on cultures or on smears does not by any means prove it is the organism causing the infection. Being anti-biotic, it so often is found when the real organism—perhaps a green streptococcus—will not grow or appear in smears. Rosenow, I think, has demonstrated this fact, and it is borne out by clinical experience when checked with careful smears early and late. This is an extremely minor point. I should say that Doctor Wesson's article should serve as a classic exposition, discussion, and guide for the practitioners of California and the readers of this magazine in the handling of the type of cases discussed.

F. S. DILLINGHAM, M. D. (320 Merchants National Bank Building, Los Angeles).—From an insurance and industrial standpoint, as well as for the information of physicians and surgeons, Doctor Wesson's paper bears a very important message.

Every case of swelling in the groin with acute pain should be carefully examined to rule out vesiculitis and vasitis before subjecting the patient to a herniotomy. Wesson has emphasized the point that acute tenderness and ecchymosis are never present in recent hernia.

The laity and many doctors do not realize how many years infection may lie dormant in the prostate and vesicles, to be stirred up by some sudden strain or excess, or without any apparent provocation. While the original infection is due to gonorrhoea in the majority of cases, many lately have been traced to infections elsewhere, such as teeth, tonsils, and the intestinal tract; and when the infection was of venereal origin the gonococcus was killed or died comparatively early.

Wesson is to be complimented for so ably calling attention to this phase of the hernia problem, and his warning should be passed down to the youngest assistant surgeons, who perhaps see these cases before they are sent to the hospital for operation.

H. A. ROSENKRANZ, M. D. (W. P. Story Building, Los

Angeles)—Doctor Wesson's wide experience in this field has made it possible for him to give us the clearest and most authoritative presentation of this very timely subject that has thus far appeared.

That forty-seven cases presenting symptoms, palpably due to urological conditions, should have been diagnosed as hernia, when hernia was present in but two of them and then merely as a condition co-existent with urological diseases which were the real causes of the symptoms, certainly stresses the need for urological consideration in these cases. The patients, the insurance companies, and medicine in general will be benefited thereby.

Aside from masturbation, I have found bicycle and horseback-riding to be an occasional cause of catarrhal prostatitis, otherwise known as prostatic congestion. These patients are neurasthenics and prone to magnify their inguinal symptoms.

As Wesson has pointed out, chronic epididymitis is a common condition, having been present in thirty of his cases. Instead of herniotomy it would have been better if some of these cases had been recommended for epididymectomy. During the past few years the removal of the clinical infected epididymis has been demonstrated to be a valuable procedure in relieving these patients of their distressing symptoms. Epididymectomy has heretofore been limited too much to the tuberculous epididymis.

I have under observation at the present time three cases in which the obstruction caused by the vas becoming involved in the scar of a vasotomy or varicocele operation has caused a flare-up of an old epididymitis. Sigmoiditis should also be ruled out in cases of left-sided inguinal pain.

The abuse of the diagnosis of hernia, as so strongly set forth by Dr. Wesson's cases, certainly indicates a need for an urological check-up. The opinion concurred in by the California Industrial Accident Commission that strain is the occasion and not the cause of almost every one of these cases of so-called traumatic hernia should be constantly borne in mind, so that these mistakes may be avoided, mistakes which, aside from their foolishness, are rather lamentable from the standpoint of the patient at least.

I feel that industrial medicine should feel grateful to Dr. Wesson for having so ably presented this pertinent subject and for having relieved it of confusion.

DOCTOR WESSON (closing)—I am very glad that Doctor Rixford brought out the fact that general surgeons see very few cases of vesiculitis. It is because they do not look for them. A rectal examination should be made routinely on all patients; even then the findings are not reliable unless the surgeon has a long finger. The cases of acute hernia cited by Rixford are very instructive; I found none in the literature corresponding to them. The suggestion that pain in the groin might be due to the hernia interfering with the blood supply of the cord is very interesting.

The subject of hernia has apparently been removed from the field of medicine, so doctors' views are only of academic interest. Recently, the Industrial Accident Commission of Minnesota denied compensation for an inguinal hernia, and the State Supreme Court remanded the case for rehearing because "the asserted medical view that hernia is a progressive disease is so emphasized and so permeates the consideration of the case as to obscure the search for the legal cause." With the general adoption of compulsory compensation insurance, there has developed a distinction between those who "practice medicine" and those in the "medical business." Eminent surgeons' opinions are not going to be accepted as authoritative by a referee or a member of the Industrial Accident Commission (the court of last resort) who is a Christian Scientist or an ardent supporter of the chiropractic cult. If it had not been for the League for the Conservation of Public Health, Christian Scientists would now be practicing before the California Commission and curing "hernia" by prayer. Several Christian Science healers have been recently commissioned in the United States Army.

The labor unions do not permit selective physical examination for employment; hence men are hired "as is" and assumed to be physically perfect. It is probable that any strain, even though common to the work, may cause

a flare-up of any latent infection. When a tuberculous vasitis with a bubonocoele is accepted and operated upon as a hernia, the insurance carrier, although planning only to pay for the operation, will eventually pay the death loss.

The compensation laws were planned to rehabilitate men injured by exertions unusual to their work; prostatitis, seminal vesiculitis and vasitis are diseases common to men in all walks of life. The professional man is not subjected to a hernia operation, because of a pain in the groin, without a careful urological examination, and the laborer should be dealt with in the same manner.

The fact that a urologist who does no routine compensation work, merely examining questionable cases as a consultant, has seen in a period of two years forty-seven cases of vasitis that simulated herniae, indicates that the lesion is very common. The discussion has called attention to the point that vasitis is also confused with hernia south of the Tehachapi.

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**Relief for the Pain in Carcinoma of the Face**—Since by far the greater number of subjects with painful cancerous lesions of the face refer the pain to the trigeminal distribution, it is with this nerve or its three terminal divisions that one must most frequently deal. In the series of thirty-five cases reviewed by Francis C. Grant, Philadelphia (*Journal A. M. A.*), in only seven was pain located outside this area. Six of the patients complained of pain in the ear, behind the ear and on swallowing. Successful injection of the second and third divisions of the trigeminal and avulsion of its sensory root did not afford the patients much relief. In dealing with pain referred to the trigeminal distribution, intracranial neurectomy is the procedure of choice. Direct exposure of the nerve roots makes it certain that they have been cut and that the maximum benefit will be obtained. Peripheral injection is more frequently employed, for patients dread the formal operation. Injection of the terminal divisions may be difficult in the presence of a malignant lesion, since the normal course of the nerve is often distorted by the pressure of the growth. In this series, twenty-four patients have been injected, with complete relief of pain in seventeen. In four, a decrease in pain resulted. Three were unaffected, although the typical anesthesia of a successful injection was produced. In ten cases, the nerve could not be reached, and no anesthesia or relief of pain followed. In five of these, operation was subsequently done with complete freedom from pain in three and partial relief in one. One patient was not relieved. Five patients were subjected to operation as a primary measure, three of whom were completely relieved. One, who died on leaving the operating room, had been given a local anesthetic and the ganglion exposed and injected with 2 cc. of 10 per cent cocaine. Up to that time, his condition had been good, but within fifteen minutes of the cocaine injection, he suddenly stopped breathing. A second patient died ten days after operation, from meningitis. The malignant growth had involved the ethmoid cells and the base of the skull over them. If the malignant growth is situated superficially within the trigeminal area, the results from nerve block are very much more satisfactory than when the deeper areas of the face and mouth are involved. If the accessory sinuses, especially the ethmoid and sphenoid or the floor of the mouth, are the site of the lesion, the prognosis for complete relief should be guarded. Of the thirty-five patients in this series, twenty-one were entirely freed from pain, six were much improved, and eight showed no change. In five of this last group, the lesion was situated in the floor of the mouth with involvement of the tonsillar pillar, and three had extensive degeneration in the maxillary bone and adjacent accessory sinuses. These three subjects refused further treatment after attempts at alcohol injection failed. Among the twenty-one patients completely relieved, nine died peacefully from metastasis within eighteen months following injection; seven are pain-free and receiving treatment. Five are apparently cured two years after treatment. In small painful lesions, with a fair chance of complete removal if vigorous treatment is instituted, nerve blocking by alcohol injection is especially valuable. Once the lesion is healed, the pain disappears.



## - BEDSIDE MEDICINE FOR BEDSIDE DOCTORS -

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects and discussants invited. Useful extracts from letters will be published.

**Editorial Note**—The suggestion that CALIFORNIA AND WESTERN MEDICINE devote space to brief discussions of specific problems of bedside medicine by bedside doctors has met with such a surprisingly enthusiastic endorsement from so many sources that this department will hereafter be featured in each issue of the magazine. Some of the subjects now being discussed are:

What constitutes the minimum evidence warranting a positive diagnosis of diabetes mellitus?

Should drug addiction be a reportable disease? Give reasons.

Management of patients with whooping cough.

Brief of evidence that warrants surgical intervention in pulmonary tuberculosis.

A brief of the evidence which justifies a diagnosis of infantile paralysis.

The practicability of radiologic visibility of the gall bladder, its availability, indications and values to the family doctor.

The symptoms and evidence that warrant a diagnosis of pyloric stenosis in infants.

Common sense and urinary lithiasis.

Minimum groups of symptoms and findings that warrant a diagnosis of syphilis.

A brief of the best modern practice in the treatment of "primary and secondary" syphilis.

The reliable and dependable remedies in the treatment of the later manifestations of syphilis and the method of their employment.

What are the essential indications for Caesarean section?

Under what conditions, if any, is appendicostomy justifiable?

What can doctors do to increase the number of useful bedside nurses at a price consistent with essentials in training and education?

Physicians who desire to add their discussion to any of these subjects, or who will suggest other subjects, are cordially invited to do so.

The policy that will be followed consists essentially in selecting timely limited subjects; having the groundwork of the discussion carefully prepared by invited authors; and then giving as many as possible bedside doctors, particularly those in unlimited practice, a chance to express opinions and give the results of their experiences with the subject.

Discussion of this first publication might have been extended to include a larger number of physicians, but has been concluded in order to start this department at an early date.

In addition to his discussion of this subject, printed below, Doctor G. G. Hawkins of Madera says in a letter of transmittal, among other interesting things, that "this is my maiden effort at medical publicity. CALIFORNIA AND WESTERN MEDICINE is in my opinion making wonderful advancement in usefulness to the medical profession, ranking with the very best of medical journals. Its pages are read by me and all other general practitioners with interest, which grows with each issue. In your space 'Bedside Medicine for Bedside Doctors' you have hit a responsive chord in the heart of every real family doctor, I am quite sure. Keep that space clear of highly scientific thought and laboratory research, continue to make it extremely practical by calling frequently upon the experience and interpretation of the country doctor. You will thereby develop and encourage him and make him feel that CALIFORNIA AND WESTERN MEDICINE is really his magazine and that he is entitled and expected to try at least to help make it a success by contributing from his own experience."

### CURRENT CONCEPTION OF RECTAL FEEDING: USES, SUBSTANCES AND METHODS

ERNEST H. FALCONER (384 Post Street, San Francisco)—In discussing the current conception of Rectal Feeding, it is important to recall certain physiological facts concerning the colon. Foremost of these is the fact that in

man the colon is of little importance as an absorbing organ. A certain amount of fluid is absorbed constantly from the colon, chiefly from the upper portion. It is estimated that about 500 cc. of water passes through the ileocaecal valve in twenty-four hours. Of this amount about 400 cc. are absorbed in the colon. The isolated colon is able to absorb about 6 grams of dextrose and 80 cc. of water per hour. Egg albumin or caseinogen solutions introduced per rectum show no absorption after several hours. After longer periods of time, some disappearance of proteins and emulsified fats has been observed, but this is probably due to bacterial decomposition, and has very little food value. In some instances where large nutrient enemata are used, it is possible that a small portion may regurgitate through the ileocaecal valve and thus become absorbed. For practical purposes, very little nourishment can be given to an individual through rectal feeding. The chief use of rectal feeding is for administration of fluids such as water, saline and glucose solutions.

The importance of keeping up the fluid intake in infections and intoxications seems to be pretty generally recognized at the present time. The basis for this procedure lies in the clinical improvement that accompanies the dilution of toxins and increased facility of their removal that follows, when plenty of fluid is present in the tissues. At the present time, the so-called "Murphy drip" is the most popular method of giving fluid per rectum and the solution generally used is glucose solution. One practical difficulty with the "Murphy drip" is that certain patients are unable to retain the solution, apparently due to irritation of the mucous membranes of the lower colon and rectum, by the continuous presence of the catheter in the rectum. In such instances it is better to give a small retention enema of about 200 or 300 cc. to be repeated about twice during the day. Glucose solutions have an advantage over plain water or saline solution in that calories are introduced in an easily utilizable form. In post-operative cases, especially where acidosis is present, in protracted vomiting, uremia, certain cases of diabetic coma (as a supplement to insulin treatment), and in bleeding gastric or duodenal ulcer, from 5 to 10 per cent glucose solutions per rectum are of distinct value. The important fact to recognize in rectal alimentation is that it is at best a method of slow starvation, and does not prevent tissue breakdown. It should not be employed over long periods of time in cases where it is impossible to take nourishment by mouth. In this type of case it is usually better to employ surgical means to perform a gastrostomy or jejunostomy and feed by means of a tube directly into the stomach or jejunum.

LOVELL LANGSTROTH, M. D. (490 Post Street, San Francisco)—Doctor Falconer is right. There is excellent evidence to show that glucose and water may reach the body cells through the mucous membrane of the colon but that food, even when partly digested, will not do so. Rectal feeding is therefore a misnomer.

Even for absorbing fluids the rectum is unsatisfactory for several reasons. The first of these is that the fluid is frequently not absorbed, the second that the tube often causes much discomfort, and the third that the greatest amount that can be given this way is usually inadequate. This fluid is intended not only to dilute toxins and aid in their excretion but also to support the circulation, to aid in distributing heat evenly throughout the body, and to bring it to the surface for elimination. In order to serve these purposes it must be given in large amounts. An individual with a gastroenteritis needs much more than his usual intake of liquid because he is losing fluid in his vomitus and in his stools; a patient with a severe infection must have more than he can be induced to take by mouth because he is losing large amounts in his ef-

forts to cool off the body. Indeed practically every illness where fluids cannot be taken by mouth requires at least 3000 cc. per twenty-four hours which the most skilful nurse could not administer rectally.

The alternative is hypodermoclysis. While requiring careful asepsis it is much more satisfactory because one is certain that the fluids get to the tissues and because it really causes less discomfort. Glucose, of course, cannot be given this way but the amount introduced rectally is so small as to be of very little value. If needed this sugar can easily be given intravenously. Generally I would rather use hypodermoclysis than to give fluids by rectum.

F. F. GUNDRUM, M. D. (Capital National Bank Building, Sacramento, California)—Adequately to provide for the body's alimentary needs by rectal feeding is not practicable. Digestive ferments poured into the intestine higher up are no longer active in the caecum. Substances of large molecular size, fats, albumins, proteoses or even amino acids are unabsorbed by the colonic mucosa. To make matters worse, the introduction of these fluids furnishes an excellent culture medium and the great increase in bacterial flora soon produces a colitis which makes further rectal interference impossible.

As a temporary means of giving the body needed assistance the large bowel has a great usefulness. Glucose, whiskey, inorganic salts and water are freely taken up and their administration may, with care, be continued over a considerable period. The so-called "Murphy" method owes its popularity to the surgeons who employ it for two or three days post operative to restore needed fluid apt to be depleted through surgical procedures. It is the common practice, at the same time, to give morphine generously, diminishing the rectal reflexes and obviating the sensorium so that the constant presence of the tube is tolerated better than under other conditions. At best the majority complain a good deal in three or four days and few are able to retain the tube longer than a week.

If the colon is carefully cleaned with salt solution irrigations and the rectal feeding introduced slowly at a temperature of about 105 degrees F., the patient's hips being somewhat elevated, it is usually possible to run in 800 cc. without discomfort and to fill the entire large bowel. Repeated at eight-hour intervals very little bowel irritability appears.

The amounts absorbed vary within wide limits. A patient much dehydrated may absorb three or four quarts of solution in the first twenty-four hours, particularly if the fluid is hypo-tonic. Potency of the ileocecal valve may also account for free absorption.

It is important that the solution used be dilute. Too concentrated a liquid will draw fluid into the bowel through osmosis. The amounts of food obtainable in this way are not great. In 1000 cc. of water, 8.5 gms. of glucose and 60 cc. of whiskey make a slightly hypo-tonic solution, a total of 454 calories. Three feedings then of 800 cc. each would yield 1089 calories each twenty-four hours.

THOMAS C. EDWARDS, M. D. (Salinas, California)—I believe that in some cases very definite benefit is obtained by rectal feeding, the laboratory findings to the contrary notwithstanding.

Where the stomach persistently refuses to retain anything given, then the introduction into the rectum of what we "old timers" have been accustomed to term, a nutrient enema, many times seems to be beneficial.

We may think we know all about what happens chemically, or physico-chemically, when food is given per rectum, but there are forces at work that are bio-chemical, and I suggest that sometimes the bio does things of which we know little.

When we remember that an "active principle" has been isolated from the pituitary of which a portion so minute as one part in seven million or more injected into a guinea pig will cause the virgin uterus to contract, may we be excused if we think that there may be some hormone or other unknown and unnamed substance, in a "nutrient enema" that will enter the circulation and cause a favorable reaction in the patient?

I am not claiming that we can adequately nourish a

patient, per rectum, but I feel certain that I have seen patients improve after its use, tided over a crisis, as it were.

This may be simply a coincidence, but I have enough faith in its use, in practice, to continue to give it the benefit of the doubt, which does *not* exist in my mind.

GEORGE GILES HAWKINS, M. D. (Madera, California)—The problem of adequately feeding a patient per rectum has never been solved nor any standardized food proposed. To the recent graduate, the various formulae offered so freely by our text books, the numerous pre-digested foods so profusely advertised, give encouragement and hope but eventually lead to disappointment.

True, in the past on various occasions we have seen transient, apparently beneficial results from rectal alimentation with such familiar stimulants and food as black coffee, whiskey, peptonized milk, variously prepared egg-nogs, peptones, etc., but the colon soon rebels against such procedures and our patient slowly weakens until something more radical becomes imperative. In certain selected cases rectal alimentation is worthy of at least a trial, bearing in mind that to be at all effective it must be properly and intelligently administered.

That a "nutrient enema" has no place in the practice of medicine one should not be so bold as to assert, but its adoption should supplement, rather than precede, such measures as normal salt by hypodermoclysis or glucose intravenously. That food absorption actually takes place in the colon is not to be disputed, but to what degree is a mooted question. That opium acts as a sedative, ether as an anesthetic, whiskey as a stimulant, when given rectally, is well known. To introduce and assimilate sufficient calories of a well balanced ration is impossible.

Hoping that food introduced in sufficient quantity to thoroughly fill the colon might, perchance, through anti-peristalsis and a patency of the ileocecal valve, find a greater absorptive field in the ileum is not to be depended upon. The normal function of the ileocecal valve prevents this very thing. Many good authorities, however, recommend a small amount of sodium chloride in rectal feedings because of its osmotic power and because of its anti-peristaltic action, helping to keep the nutrient well up in the higher portion of the colon and hoping, almost against hope, that some portion of the feeding will leak through the valve. Not believing in this possibility, the more rational method of feeding would be smaller quantities of eight ounces at eight-hour intervals.

With the oral, nasal and gastric route blocked, our temporary detour is often, and of a necessity, via the rectum. The psychic effect not only upon the starving patient, but upon the anxious relatives as well, gives to the family physician also a sense of satisfaction and relief in that he has attempted to do what he could, awaiting the opportune time to render greater assistance if possible.

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The annual report of the California Industrial Commission emphasizes the magnitude of the state-managed insurance company. According to the report, "The Fund now does a premium business of nearly \$6,000,000 per year and returns an average 30 per cent yearly dividend to its policyholders. On June 30, 1925, the Fund's reserves amounted to \$4,347,434.79 and its catastrophe surplus totaled \$2,156,988.78.

"The report also contains a diagram showing the comparative industrial fatalities over the ten-year period, 1914-1924. It is interesting to note that the number of fatalities per 100,000 population has decreased from 25 in 1914 to 16.4 in 1924."

The most interesting opinion expressed is, that farm labor is becoming more hazardous with the introduction of modern machinery. There were 32 fatal accidents, 40 permanent disabilities and 5115 other injuries during the year. In view of these facts the Commission believe that the compensation laws should be amended to include farm labor.

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It is great fun to be an idealist and keep a rendezvous with death at some disputed barricade, or, in Mr. Pickwick's less thrilling phrase, to shout with the crowd, and if there are two crowds, shout with the largest.—Gerald W. Johnson, *Century*.



## Clinical Notes and Case Reports

### REMOVAL OF OPEN SAFETY-PIN, SIX WEEKS IN INFANT'S HYPOPHARYNX

By J. A. BACHER,\* M. D., *San Francisco*  
(From Ear, Nose, and Throat Department of the  
Stanford Medical School)

THE following report proves that an open safety-pin, 3 cm. long, with an open spread of 2 cm., can lie in the hypopharynx of an infant for six weeks, and that a general anesthetic can be administered and adenoidectomy performed without noticing or dislodging this foreign body:

Baby D., age 6 months, first seen April 7, 1923. Complaint: Fever and tender left cervical swelling of twenty-four hours' duration. History: Difficulty in nursing for several weeks. Gained weight until March 24, when the weight was 16¼ pounds. No food taken from March 24 until March 29. Adenoidectomy under general anesthesia by an ear, nose, and throat specialist on March 29, "to remove the probable cause of the difficulty in nursing."

Present Illness—Fever and cervical swelling for twenty-four hours. Pediatrician wishes ear, nose, and throat excluded as cause of fever.

Physical Examination—Weight 15½ pounds. Temperature 101.2, rectally, at 3 in the afternoon. Small, tender left cervical swelling. Nose normal. Nasopharynx negative to finger palpation. Both membranae tympani normal. Throat normal. Extreme depression and forward traction of tongue brought the loop of a safety-pin into view. Removed with forceps on loop and finger on point.

Subsequent History—Since removal of the safety-pin the mother recalls that a safety-pin was missed February 26, six weeks previous to operation. That evening the child had a choking spell, and whooping cough was suspected. Next day, expectorated material looked like varnish. Mother remembers that the baby stopped cooing about that time.

Convalescence—Temperature, while in hospital, showed moderate elevation for a few days and then returned to normal. The baby again nurses well, coos, and tries to talk.

Lane Hospital.

\*John A. Bacher (Stanford University Hospital, San Francisco), M. D. Harvard, 1911; A. B. Stanford University. Practice limited to diseases of the ear, nose and throat. Hospital connections: Ear, Nose and Throat Clinic, Stanford Medical School. Appointments: Associate Professor Surgery (Otolaryngology and Rhinology), Stanford University Medical School. Publications: Ear, Nose and Throat Contribution (Progressive Medicine, 1925 and 1926).

### THE USE OF CANVAS BELTS IN THE TREATMENT OF FRACTURES OF THE RIBS AND CLAVICLE

By HARRY M. WEGEFORTH,† M. D., AND  
ARTHUR WEGEFORTH, M. D., *San Diego*

The treatment usually recommended for fractured ribs is immobilization by strapping with adhesive plaster, extending about three-fourths around the chest, applied either from below upward or from above downward at the end of a forced expiration, each strap overlapping the preceding one.

The objections to the use of adhesive plaster are:

1. Often a severe dermatitis forms in a short time after

†Harry M. Wegforth (400 Granger Building, San Diego), M. D. University of Maryland, 1906. Practice limited to general surgery. Hospital connections: Mercy Hospital, San Diego. Appointments: Examiner for several insurance companies and S. D. & A. Railroad. Publications: Relation of Bovine Tuberculosis to Man, Use of Antivenom in Treatment of Snakebite, Automatic Clip Instrument for Use in Obstetrics. Universal Surgical Motor (Sterilizer). He exhibited specimens National Congress Tuberculosis, 1908, Washington, D. C.

straps are applied, even when strips of gauze are first laid along the straps.

2. After straps are applied, there may be increased swelling, causing more pain and discomfort, and when the swelling decreases the plaster often wrinkles and becomes worthless as a support and it is impossible to remedy the defect without reapplying the plaster.

3. In cases of compound fracture it is often difficult to redress the wound without removal of the plaster.

4. In a serious case reapplication of plaster may become a problem, as removal of old plaster would be very painful and perhaps in some cases impossible on account of the condition of the patient. Even with great care, abrasions of the skin may result and act as avenues of infection.

5. In the event of the necessity of additional radiographs, which may be required from time to time, it would be necessary to remove the plaster, which would be very annoying to the patient and, in addition, may disturb the position of the fragments.

6. Another objection is the impossibility of keeping the skin clean, with the result that the integument becomes macerated and a dermatitis results. This condition is very offensive to the patient, especially in warm weather, and is insanitary. It is also unsatisfactory to the surgeon who takes pride in his work, as the plaster becomes quickly soiled and unsightly.

7. Patients often complain of pain and irritation upon sudden movement of the affected side, due to pulling of the plaster.

8. Plaster often becomes quite expensive when a large amount—sufficient to strap the chest several times—is used. This may become quite a factor, especially in charity work.

9. In applying plaster on female patients it is often difficult to apply straps satisfactorily over the breasts.

10. In cases where the ends of the bone are driven inward, strapping can rarely be done, as there is considerable danger of irritating or compressing the lung. Under these conditions, tight constriction of the chest should be avoided. Tight applications are generally contra-indicated also when the lower ribs are broken.

Emphysema may also follow fracture. In cases of pneumothorax it may be necessary to draw off the air through an aspirating needle or cannula, which could not be readily accomplished if plaster was applied to the chest, without removal of the plaster. In cases of haemothorax, pleurisy, pulmonary congestion or pneumonia, it may be desirable to auscultate the chest from time to time for diagnostic purposes and prognosis.

In view of the foregoing objections, we endeavored to discover some substitute that would afford complete support to the fractured ribs and would be comfortable to the patient. After considerable experimenting we found that the canvas belt, as shown in Figure No. 1, fulfilled these requirements very well.

This belt can be readily made by any dealer in surgical and orthopedic appliances. It can be made of any weight or width desired. The belt is held in place by four straps passed through buckles attached to the opposite edge of the belt. The number of straps may be increased or diminished, as the circumstances require. In order to prevent the belt from slipping down, straps are attached to the upper part of belt in the back and are crossed and carried over the shoulders and through buckles attached to front of belt. By means of these straps the belt can be raised or lowered as desired.

Its use may be extended to include treatment of myalgia, pleurodynia, lumbago, or any other condition requiring rest.

This principle may also be used in cases of sprain of the sacro-iliac joint, the straps being fastened at the lower part of the belt and extending over the perineum.

In discussing the uses of the canvas belt in the treatment of the fracture of the ribs, we wish also to call attention to the application of this principle in the fracture of the clavicle.

Among various methods of treatment suggested by surgical authorities are:

Sayre's dressing of z. o. plaster, Mayor's scarf or sling, posture, plaster of paris, in the abductor method, modified Sayre's, Velpeau, modified Velpeau, recumbent method on a Bradford frame, Moore's figure-eight and clavicle cross.

The same objections to the use of adhesive plaster in

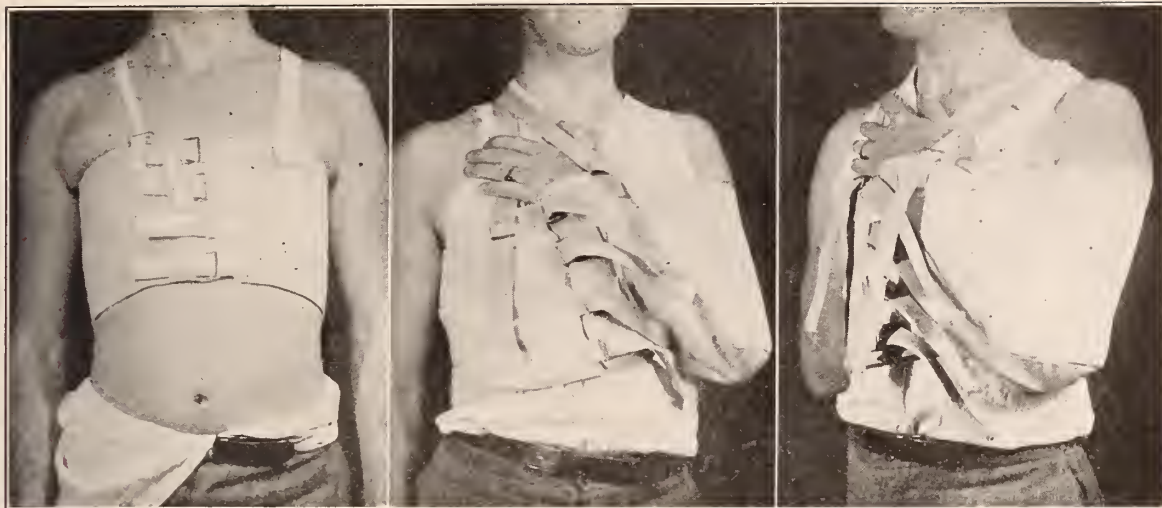


Fig. 1. Use of the canvas belt in the treatment of fracture of the ribs.

Fig. 2. Use in treatment of fracture of the clavicle.

Fig. 3. Use in treatment of fracture of the clavicle with additional strap.

the treatment of fracture of the ribs applies also in the case of the clavicle. With the posture method, very few patients are willing to submit to treatment in bed for the required length of time, as it becomes very irksome, due to the long restraint necessary.

The Velpeau and the modified Velpeau methods of treatment are also often unsatisfactory, as it is frequently necessary to reapply the bandages from time to time, due to the stretching of the bandages, and it is often difficult to keep the turns in place.

Objections are often raised in regard to the figure of eight and clavicular cross, on account of the discomfort while the patient is in the prone position.

This belt is similar to that described for fracture of the ribs, with the addition of a pocket and a flap to support the elbow and forearm.

This appliance is not only useful in the treatment of fracture of the clavicle, but also in fractures of the arm, elbow, and shoulder, in addition to other means of immobilization or any other case requiring support.

In case of fracture of clavicle, with a tendency to displacement, an additional strap is added to top of belt, the end of which is passed through a buckle on front of belt over a pad placed over the fragments. The degree of pressure can be regulated by tightening or loosening strap as desired.

After considerable experience with the use of these belts, we believe that they have many advantages over many of the present methods of immobilization in the treatment of the above injuries. An additional advantage is that they are inexpensive, easily applied, offer a firm support, and can be laundered and repaired as often as desired.

400 Granger Building.

## SPONTANEOUS STRANGULATION OF THE SPERMATIC CORD

### REPORT OF A CASE

By WILLIAM S. KISKADDEN,\* M. D., *El Centro*

Spontaneous mechanical strangulation of the spermatic cord, a comparatively rare condition stimulating both strangulated inguinal hernia and acute epididymitis, has recently been fully described by Thorek in a review of the literature and a report of two cases.

Because of one or two unusual features I wish to report the following case:

C. F. H., male, married, age 31—plasterer. In bed in apparently severe pain. He related that while still in bed he had felt a sudden pain in his right testicle with swelling and radiation of the pain to his abdomen along the course of the cord, and terminating over the external ring. He has had no nausea, or vomiting and his bowels had moved that morning.

At twelve he had mumps, which had descended into his left testicle. He stated that his right testicle had frequently become slightly swollen, but had never pained him and the swelling usually disappeared in a day or so.

Physical examination showed his left testicle atrophied, his right probably once again its usual size, drawn up slightly in the scrotum. There was no redness. The testicle, cord and abdomen were exquisitely tender.

Because of his lack of fever, only moderate swelling without fluctuation, or redness of the scrotum, normal blood count, and open bowels he was placed upon treatment consisting of alternating cold and hot applications, pelvic elevation and codein. This treatment was continued four days and then, because of no change in the condition, operation was insisted upon.

Under ether an incision 10 cm, long was made in the right side of the thickened scrotal wall. A small amount of black blood escaped. The epididymis was greatly enlarged, black and apparently hopelessly gangrenous. The testicle was enlarged to perhaps one-half again its normal size and was dull gray in color. The cord was thickened with definite hard areas just above the testicular attachment, which proved to be the site of the kinking. The contents were delivered free of the scrotum and unkinked of three complete turns from right to left. Under hot applications the black color of the epididymis was relieved and shortly the cord, epididymis and testicle bled freely on puncture. Because of his atrophic left testicle it was felt that it would be wiser to try to save the right and the mesorchium was fastened to the scrotum so a recurrence of the twisting would not be possible. Closure with drainage was made.

Three weeks later it was apparent that in spite of elevation and continuous hot packs the right testicle could not be saved and it, with the epididymis, was removed through high ligation of the cord. Recovery from this operation was uneventful.

Two and one-half months have passed following onset of trouble and patient has not yet been able to demonstrate any function in the atrophic testicle. His weight has increased ten pounds over normal.

**Conclusion**—A case of spontaneous strangulation of the spermatic cord is added to the literature.

Differentiation from strangulated hernia and epididymitis may not always be easy, although early operation may safely be insisted on in all three conditions.

The cardinal diagnostic points of Thorek are worthy of repetition, namely, sudden onset, extreme tenderness, swelling with no fluctuation, radiation of pain along the cord, normal temperature, and leucocytosis.

Blood vessel strangulation of the cord after seventy-two hours may be partially revived but is exceedingly difficult to maintain. This is in agreement with Thorek.

An atrophic testicle secondary to mumps apparently has resulted in complete loss of function.

Dunaway Building.

\*William S. Kiskadden (Dunaway Building, El Centro), M. D. University of California, 1922.



## EDITORIALS

### THE ART AND PRACTICE OF MEDICAL WRITING

The little book of some 150 pages by George H. Simmons, the dean of medical editors, and Morris Fishbein, editor, Journal of the American Medical Association, recently issued from the American Medical Association press under the above title, stands pre-eminent among the many useful books of its class. This book, which is a revised and enlarged edition of the well-known "style book" of the Journal of the American Medical Association *and more*, is destined to have a far-reaching beneficial influence upon medical writing.

Even the most experienced medical editors and authors will find "The Art and Practice of Medical Writing" decidedly helpful; less experienced writers and beginners will find it an essential guide in the development of a most difficult specialty—medical writing.

There are three classes of medical periodicals: Those which in effect are records of transactions of medical bodies: they are about as interesting and useful as a census report. Another class is devoted to promoting interests, financial, group or personal, without due regard for scientific progress: they, properly speaking, are not legitimate medical literature, but propaganda. They are what are widely known as "house organs." The third and important group of medical periodicals is that which promotes primarily the cause of medical science. Magazines of this group reflect the standing and intelligence of the best medical thought of their communities and particularly of their editors and contributors. Periodicals of this class are growing in usefulness and influence and their onward progress will be materially aided by following the sound principles laid down in "The Art and Practice of Medical Writing." Most good medical magazines are owned and published by medical organizations, among which are found influences supporting each of the above mentioned classes of magazines, the dominant medical influence of any community being constantly and lucidly reflected in the medical magazine they issue.

Contributions of medical authors who comply with the principles laid down by Simmons and Fishbein in their little book are always welcomed by editors of good medical periodicals and accepted for publication within the limits of available space, and of the purposes of the magazine; those whose contributions are declined may usually find the reasons fully explained in "The Art of Medical Writing."

### BIBLIOGRAPHIES

The editor of CALIFORNIA AND WESTERN MEDICINE receives quite a number of letters commending or criticizing our present attitude of not publishing bibliographies except in special instances. Some of the chief reasons why references and bibliographies are not printed are emphasized in the following

abstract of a letter from one of our Editorial Councillors:

"The bibliography furnished by Doctor \_\_\_\_\_ with his article on \_\_\_\_\_, is not worthy of publication. It is an insult to the editor of a medical journal to ask him to use up space (which could be utilized for another article) in publishing a list of journals and books which the writer did not use in preparing his paper. I have investigated all of the articles referred to in the bibliography and am satisfied that the author consulted none of them, as *most of his references are incorrect*.

"Detail men take up our time trying to sell us a 'research service.' For \$2 an hour they will collect pages of references that sound as though they might have a bearing on the subject. Many an author writes a ten-page article, quoting therein ten or twenty authorities, and then appends an eight-page '\$2 an hour' bibliography that does not include a single one of the authorities referred to in the paper. A *carefully prepared* bibliography is often as important as the article itself. Its preparation requires much research and the mere transcribing of the titles takes about four times as long as the text.

"Only two methods of listing references are recognized, that of the Cumulative Index and of the Index Medicus. Every author who prepares his own bibliography follows one or the other system. Hence, what is the editor to infer as to the bibliography that gives only surnames, no initial and no title; or uses different abbreviations in adjacent references for the same journal; or refers to a foreign journal merely by number when that year may not be on file in the Surgeon General's library; or refers to a foreign volume that contains 760 pages as 'pp 1—760' when his reference is on page 23 in the volume? Then why waste space on incorrect references that the writer has not read and the editor knows he has copied from a translated abstract? Pages of unessential references with incorrect titles, volumes, years or pages do not impress the editor nor will they fool any informed reader and the uninformed is not interested although he may be impressed. This is comparable to the Grant Avenue Chinaman's 'window dressing.' The Oriental naively explains that it impresses the ignorant and has no relationship to what is in the store.

"Bibliographies made up of references used by an author in his paper always should be published, for the reader can often find a reference in the bibliography that may open new fields of literature to him. Unfortunately, the Cumulative Index and the Index Medicus list merely titles and too often the author's title gives you no information as to the contents of his paper. A list of references prepared by a hired assistant or a 'research institute' which adds nothing to the paper and is generally full of mistakes should never be allowed space. No person wants to search for incorrect references. The rule followed by Sir John Thomson-Walker is an excellent one—those articles which have good bibliographies are listed first, consequently it is not necessary to quote individually all the references."

There is no more difficult work than that of accurately checking and editing a bibliography.

Good bibliographies are valuable, at least in original research work and in certain classes of reviews. On the other hand, there is nothing more harmful than an inaccurate or incomplete collection of alleged references bearing upon a subject. The actual checking up of quoted references from actual papers has long since established the fact that fully 50 per cent of bibliographic references attached to manuscripts are incorrectly applied or incompletely made.

CALIFORNIA AND WESTERN MEDICINE has neither the funds nor the personnel to do this tedious difficult work for authors. If the majority of the members who own the magazine wish bibliographies of the right kind, and the California Medical Association will so instruct the editor and provide funds for a competent librarian to do the work, we will be very glad to add that service to the magazine.

This matter will be one of the points mentioned in the editor's report to the California Medical Association at its 1926 session. Those who wish changes made in the policies that are now being carried out under council rulings should make their wishes known by letters to the secretary of the California Medical Association or by instructing their delegates to the 1926 convention to act as they wish them to act in this particular question.

#### WHO NEXT?

Minnesota wins and California loses in the transfer of Walter C. Alvarez from the University of California Medical School and Hooper Foundation to the Mayo organization.

Alvarez undoubtedly will be happier and more usefully productive in the stimulating atmosphere and more comfortable surroundings that characterize Mayo's or any other intelligently conducted medical center. But what about California's loss? Will the University promptly fill this important vacancy, or will they save money by leaving it vacant as they have other important positions in the San Francisco departments of the medical faculty?

George Whipple, an outstanding pathologist and medical teacher of world-wide reputation, was allowed to leave the deanship of our State university some years ago because of stupid parsimony and insecurity of tenure called "economy." The position has remained vacant since that time. Why Doctor L. S. Schmitt has been *Acting* Dean during these weary years is difficult to understand unless, as is now humorously stated, "*Acting*" has become a new pedagogic title in our State medical educational system. If Schmitt is worthy, he ought to be appointed Dean, and given the salary of the position; if he is not deserving, some one qualified should be called to this important position, given a decent salary, some security of tenure, and enough authority to perform some overdue surgery necessary to save a seriously ill but nevertheless much worthwhile patient.

Not only medical alumni of the University of California, but decent doctors, and many other loyal citizens everywhere, are becoming seriously disturbed over the lackadaisical management of

the San Francisco departments of this one time great medical school. This school is costing the people of California some millions of dollars annually. They ought to spend much more upon it and no doubt will do so when they see evidences of better use of what they are now supplying. The faculty still has the services of many splendid physicians and medical teachers who are doing all they can under conditions made difficult for somewhat obscure reasons. But that spirit of progress and team work which is the greatest asset any medical institution can have is not strikingly evident at the University of California Medical School. Under capable leadership, sound financing and the intelligent delegation of necessary authority, it can be, ought to be, and must be restored.

#### INTRAVENOUS USE OF DYES

Reports in the literature have indicated for some time the uncertain status of the dyes used intravenously in the treatment of certain infectious diseases. The recent discussion by Churchman (page 243), leaves the impression that the entire subject of intravenous dye therapy is handicapped by serious limitations and uncertainties. The factor of spontaneous recovery is rightly emphasized and should be taken more seriously into account with all therapeutic agents than it generally is. An important difficulty is the uncertain nature of septicemias themselves. No two seem to be alike. In this state of affairs it is obviously difficult to secure adequate controls for proper evaluation of the dye treatment. What appears to be a successful cure in one case may be entirely accidental as far as participation of the dye is concerned, and the result in another case is not predictable. In fact, the literature contains several reports of negative and even detrimental results.

A limitation to the dyes appears to be an alleged inability to attack hidden foci of infection. There is no reason to believe that such hypothetical foci are less permeable than the tissues in general, whose permeability to the dyes is claimed to be good. The lack of curative efficiency may or may not rest on this alleged difficulty. Other possibilities remain. For one thing, the dyes may, and probably do, produce effects other than those on micro-organisms. It is known that many agents may produce beneficial effects in clinical infections independently of antiseptic efficiency, or of their etiology. This seems to be true of the agents used in non-specific therapy, many of which are injected intravenously. For instance, typhoid vaccine is reported to be beneficial in rheumatic fever; and peptone, milk, plasma, foreign colloids, certain irritants, etc., are claimed to benefit both acute and chronic infectious diseases irrespective of the etiology.

The physical and chemical changes in the blood and tissues produced by agents used intravenously are important. The changes range from the just demonstrable to marked and probably explain the reactions, and even deaths that sometimes occur. The dyes that are advocated intravenously (gentian violet, mercurochrome, etc.), have not been investigated sufficiently from this standpoint, but if one



may judge from the reports of serious reactions and deaths, taken together with the marked changes at autopsy, these dyes probably cause important physical and chemical changes. Further study of their behavior in the body is desirable, and may lead to a better understanding of their therapeutic limitations. Besides this, much more experimental work needs to be done on their antiseptic efficiency, for such work always has been, and probably always will be, a valuable guide to clinical trials, the objections of Churchman to the contrary notwithstanding.

The value of experimental studies is reiterated in the recent work of Walker and Sweeney at the Hooper Foundation of the University of California Medical School, San Francisco. They state that the method of treating infected animals is not without analogy to the treatment of human bacteriemias by intravenous injection of chemotherapeutics, and in any event, these experimental methods do give results that are strictly comparable with one another, and considerable experience indicates that they are the best available methods for measuring the relative chemotherapeutic action of different substances against the several bacterial infections. Using infected mice and different methods of administering different organisms and dyes under controlled conditions, Walker and Sweeney found that the therapeutic action is not equal for the several dyes against all types of bacterial infections. Each dye appeared to be more or less specific in its chemotherapeutic action. Gentian violet was effective only in staphylococcic infections, while mercurochrome subcutaneously was more effective in streptococcic than staphylococcic infections. Acriflavine was ineffective in the circulation. In fact, the therapeutic action of all these dyes was greatly reduced, if not wholly destroyed, when they were not brought into immediate contact with the infecting bacteria.

More work of the type of Walker and Sweeney's is needed. After sufficient experimental trial, extensive and properly controlled clinical trials should be made before the dyes can be used intravenously with safety and a reasonable degree of therapeutic success. Meantime, bearing in mind that clinical reports to date are contradictory, the results are uncertain and the dyes may do more harm than good, it would seem wiser to abandon their use intravenously in human subjects. Certainly the evidence at present is insufficient to warrant their extended and general use.

Churchman: *J. Am. Med. Assoc.*, 1925, 85:1849, "Intravenous Use of Dyes."

Walker and Sweeney: *J. Pharm. Exp. Therap.*, 1926, 26:461, "Chemotherapy of Bacterial Infections. I. Action of Acriflavine, Gentian Violet and Mercurochrome in Experimental Bacterial Infections."

### CHARITY AS BIG BUSINESS

A visionary scheme was rediscovered and launched some years ago to convert the service of giving, consecrated by Jesus Christ and ordained an outstanding requirement of his followers, into a business to be operated upon a business basis to such an extent that, as one of the leaders in the scheme predicted, the people who ruled this new business venture were to become the "unofficial government."

The thing went off with such speed that mature

judgment was rolled flat before it could be expressed. The inevitable reaction is well under way and the time is not far distant when schemes to make charity not only business but Big Business, instead of the spiritual Christian attainment that Christ commanded his followers to practice in such secrecy that the left hand was not to know what the right hand doeth, will disappear. When these well paid promoters started out to substitute an "unofficial government" operated as a business for charity as it exists in the hearts of man, they lost sight of the fact that money and government and business efficiency are the least important elements of charity.

Communities do not need "unofficial governments." Things that are important enough and big enough to require government interest should be handled by official government. If official government fails to do its duty, the problem will be solved by making such government better, not by creating an "unofficial government" which is calculated to grow—as it has grown in places—into multiple unofficial governments. Charities that are not large enough to require government interest supply ample opportunities for the outpourings of the personal and group spirit of charity as Christ ordained it to be. We are on our way back to this sound road. The recent commendable action of the San Francisco Chamber of Commerce in creating a Council on Charity Funds, to function somewhat along the lines of their former Charities Endorsement Committee, is a step in the right direction.

No "unofficial government" has ever been able to enthuse those who serve or those who are to be served by substituting autocratic regulations of selected representatives for charity as it exists in the hearts of Christian people.

### 1926 DUES

All subscriptions to CALIFORNIA AND WESTERN MEDICINE, included in membership dues in the California Medical Association, expire annually with the January issue.

Under the postal laws, CALIFORNIA AND WESTERN MEDICINE is required to drop from its mailing list unpaid subscriptions. Those members whose dues are not received from the secretaries of their county societies before March 1 will not receive CALIFORNIA AND WESTERN MEDICINE after that date until their membership is again in good standing. Those who desire to keep the files of their magazine complete should avoid this contingency, because CALIFORNIA AND WESTERN MEDICINE has a very limited number of surplus copies with which to supply calls for back numbers.

**Report on Antistreptococcus Serum**—Of twenty-five leading surgeons, gynecologists and obstetricians who were questioned by Emil Novak, Baltimore (*Journal A. M. A.*), as to their opinion of antistreptococcus serum, sixteen considered it of no value, one said he knew nothing about it, and eight expressed the opinion that, while usually unsatisfactory, it might for certain indications be of real value. The chief of these was for a supposed protective or prophylactic action, while occasional good results are mentioned where the proper strain of streptococcus happens to be selected. Not a single one of the twenty-five questioned evinced any degree of enthusiasm for the serum.

## - The MONTH with the EDITOR -

Notes, reflections, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

Headlines in many newspapers announce that over \$135,000,000 in charity service is given annually by the doctors of the United States.

In addition to this, doctors are criticized who fail to contribute liberally in funds used by uplifters to promote their pet projects.

For shame!

There's plenty of time—Personally we do all our dieting tomorrow—we're always too hungry today for any such nonsense.

"I doubt if it be possible," wrote Thomas R. Marshall about doctors, "for the pen of man really to embalm in words the trials and incidents of such a life. Indeed, it would be almost a useless task to undertake the writing of it, for it is not worth while for one to read that which he cannot visualize with some of his own personal eyesight. . . . And yet, I think, if service is to be the true mark of greatness in a people, all these other wonders of a wondrous age and state must pale into insignificance beside the service and sacrifice of the country doctor."

If our speed maniacs must have human fodder for their depraved appetites why not people our "safety zones" (?) with some of the 2,000,000 lepers who are scattered over the earth?

Or do these murderers insist upon the blood of women and children as hors d'oeuvre?

According to the Public Press:

—Morris Fishbein devotes the fourth of his series of well-told stories about the progress of medical science, appearing regularly in the *Scientific American*, to serums, vaccines, surgery and the outlook for prolonging life through hygiene.

Fishbein has the knack of making interesting reading of the story of medical progress without making farce comedy of life's most serious problem; without making caricatures out of physicians and without making the pronoun "I" too obvious.

Too much of our alleged "health education" reads like the advertisement of a new cure by the I of medical fakery.

—Doctor Joseph Collins (Dearborn Independent, January 2, 1926), uses his exceedingly effective literary rapier on Sigmund Freud and his methods in the first of a series of three articles dealing with that cult.

The majority of physicians will find something useful to them in their work in these scholarly discussions by one who entertains while he edifies.

—"Just what can medicine accomplish biologically in relation to disease?" asks Raymond Pearl (*American Mercury*). "The only thing it can really do," continues the author, "is to aid the organism in its adaptive regulatory efforts. But it can do this in several important ways which it is worth while to list and briefly characterize."

"1. It may greatly reduce (theoretically even to zero) deleterious agents which by their invasion of the organism upset its normal balance. Here lies the chief field of preventive medicine and sanitation, and here are to be mentioned such great triumphs as the imminent disappearance of yellow fever from the face of the earth, of malaria from civilized urban communities, etc.

"2. It can aid the organism *directly* in its regulatory efforts, by increasing the power of the specific adaptive mechanism against disease, as by injecting diphtheria

anti-toxin or anti-typhoid vaccine, or by the exhibition of such drugs as quinine in malaria, mercury or arsenic in syphilis, etc. In ways such as these the physician directly and literally saves lives.

"3. It can help *indirectly* to increase the adaptive powers of the organism by so guiding and directing the course of affairs as to bring to an optimum the internal and external conditions of life. Rest and forced feeding are of enormous aid to the body in its struggle with the tubercle bacillus. Neither the rest nor the food kills any germs, but they put the body in such condition that its own resources are developed to a maximum. In this field belong many of the great advances of therapy.

"4. It can alter the structure of the body by the removal or repair of worn out or damaged parts, thus clearing away often insuperable physical barriers to the successful adaptive regulation by the organism of its difficulties. The accomplishments of the modern surgeon furnish aid of a high order to the organism in distress. His activities, like those of the physician, listed in the second category above, sometimes literally and immediately save lives. \* \* \*

"There is a fifth thing, and practically a very important one, that the wise physician does for his patients. He cheers them up, allays the fears grounded in folkways that go back to tree-dwelling days, and by improving their morale again clears the way for the *vis medicatrix naturae* to do its work."

—"A California farmer recently told his local school board: 'You haul my Jim to school in a heated bus and then you hire a physical education teacher to take him out and exercise him.'

"We have met with no better description of the paternalistic nonsense that wastes the taxpayers' money and ruins the taxpayers' children," says the *San Francisco Bulletin* in commenting upon this epigrammatic blow to paternalism.

—Sciosophy received another severe blow when a Superior Judge ruled that the California Chiropractic Board, created by an initiative law, lacked authority to pass upon the qualifications of chiropractic schools.

It seems that sciosophists are more successful in fooling sick people than they are in drafting laws.

—Professor Irving Fisher, "a Yale man and one of the founders of the Life Extension Institute," seems to be considerably exercised over the editorial published in the *Journal of the American Medical Association* about the article by W. E. Musgrave on "Social Movements for Prolonging Life." Fisher closes a letter to "Time" (January 4, 1926), with this:

"There is nothing which I have helped start in which I take greater pride than the Life Extension Institute, and I would gladly spend several thousand dollars out of my own pocket if thereby I could put in jail the man who is back of these misrepresentations."

Any member of the Institute's board of hygiene could tell Professor Fisher that such anger is calculated to raise blood pressure; his publicity directors could tell him that it is not good salesmanship and, most important of all, anger is not conducive to life extension.

—One tooth brush to each three persons (35 million) was sold in the United States last year. Allowing for the reasonable allotment of three brushes a year, it would seem that at most some 10 per cent of our people use tooth brushes.

Aside from the question of the health virtues of the tooth brush, the fact that all the active propaganda almost every agency of society could put forth induced only 10 per cent of the population to practice a cheap, simple



habit of cleanliness, makes one wonder about the effectiveness of much of the health education just now so popular.

—"Sometimes money speaks very precisely where words only speak vaguely," says an editorial (Scientific American) in reviewing an amusing incident chronicled by the Journal of the American Medical Association. "It seems," continues the editor, "that one of the insurance companies makes a special feature of insuring doctors—and other healers that are not regular doctors—against damage suits for malpractice. Thus it costs an M. D. \$12.50 a year to insure himself against such suits to the extent of \$5000. But it costs the practitioner who uses the E. R. A. (Electric Reactions of Abrams) methods \$50 to get the same protection.

"Now the insurance company is no stickler for sentiment and its rates are based on definite, past experience—nothing else; and certainly not on guesswork. In other words, they know pretty closely how great their 'risks' are. Twelve dollars and fifty cents against \$50 is four to one.

"Money does talk very plainly, sometimes!"

"The Doctor Looks at Biography": What a delightfully entertaining and informative book Doctor Joseph Collins has written under the above title. It is a logical sequence to his "The Doctor Looks at Literature," and promising of other good things from his pen already being forecasted by his magazine articles.

The talent is given to few physicians to successfully interpret to all who read, the applied truths of medical philosophy and facts as they should be understood by all people. Doctors like Collins, Raymond Pearl, Morris Fishbein and others are doing much toward maintaining the high standards set for medical literature by Oliver Wendell Holmes, Weir Mitchell and Sir William Osler.

Let's all go to Dallas. Why not get up a special train, leaving San Francisco and picking up some extra coaches as it passes through Los Angeles, and go to the A. M. A. meeting, April 19-23, 1926, several hundred strong?

"There are just two kinds of people in the world—those that advance and those that hamper progress, the doers and the ditchers. Whatever the doers, in their enthusiasm, conceive and suggest, the ditchers are bound to oppose and to wreck, if they can. The majority of us are simply neuters in this war of progress; our indifference is the battleground for the doers and the ditchers."—Editorial, Medical Standard.

Several correspondents ask if we cannot do something about the cheap cocktails disguised as patent medicines that are sold over the drug counters and advertised extensively in some newspapers.

One doctor tells of an instance of alcoholic neuritis contracted by a patient from taking a female weakness cure; another points out that newspapers are not allowed to advertise good liquor but they do advertise alcoholic preparations with a medical name.

What can we do about it? *Nothing.*

#### California, Nevada and Utah Doctors Publish Elsewhere:

—Franklin R. Nuzum, Santa Barbara, writes on "Pelagra Associated with Carcinoma of Ileum," Journal of the American Medical Association, December 12, 1925.

—Frank Hinman, San Francisco, and Alexander B. Hepler, Seattle, "Experimental Hydronephrosis: The Effect of Changes in Blood Pressure and in Blood Flow on Its Rate of Development, and the Significance of the Venous Collateral System. III. Partial Obstruction of the Renal Vein Without and With Ligation of all Collateral Veins," in the Archives of Surgery, December, 1925.

—Frank E. Blaisdell, Sr., San Francisco, "the Osteogenetic Function of the Periosteum," in the Archives of Surgery, December, 1925.

—Thomas E. Gibson, San Francisco, and Adolph A. Kutzmann, Los Angeles, "Malignant Tumors of the

Testicle, a Pathological Study," in the Annals of Surgery, October, 1925.

—Adolph A. Kutzmann, Los Angeles, "Non-Parasitic Chyluria," in the Annals of Surgery, November, 1925.

—Harry S. Fist, Los Angeles, "Maternity Clinic of Los Angeles Helps Poor Women," in the Nation's Health, November, 1925.

—William Happ, Los Angeles, "The Teaching of Nutrition in the Public Schools," in the American Physical Education Review, October, 1925.

—Douglass W. Montgomery and George D. Culver, "Paraffinoma," Journal of the American Medical Association, January 9, 1926.

—Lionel P. Player and Francis H. Redewill, San Francisco, "Autonephrectomy: Animal Experimentation, with report of an Unusual Case," in the Journal of the American Medical Association, January 2, 1926.

—Albert H. Rowe, Oakland, Calif., "The Treatment of Bronchial Asthma," in the Journal of the American Medical Association, June 20, 1925.

—John William Shuman, Los Angeles, writes on "Southern California as a Rendezvous," in the Medical Herald and Physiotherapist, January, 1926.

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**The Use of High Carbohydrate Diets in the Treatment of Diabetes Mellitus**—With the use of the high carbohydrate diets, W. D. Sansum, N. R. Blatherwick and Ruth Bowden, Santa Barbara, California (Journal A. M. A.), have found no difficulty in keeping patients sugar free and with a normal blood sugar. The patients are restored to a more nearly normal state of physical and mental activity. They are freed from the slightest traces of the acetone type of acidosis. Potatoes, milk and fruits have made it possible to eliminate the acid-ash type of acidosis which the authors believe has been a cause of the high incidence of blood vessel disease. The diets are more palatable. The patients lose their craving for forbidden foods, especially for the carbohydrates. A somewhat lower caloric intake is apparently required for full maintenance. These diets are cheaper, because they contain no special foods and much less of the expensive fats, such as cream, butter and olive oil. Theoretically, at least, and because of the entire freedom from acidosis, such diets should afford the patients the best opportunity for partial recovery. Except for the omission of sugar and of foods actually sweetened with sugar, these diets are essentially normal, containing white bread, potatoes, milk and large servings of fruit. With some diets even sucrose has been included. Whereas former diets contained in addition to adequate protein, as high as from 2 to 2.5 gm. of fat to each gram of carbohydrate, these new diets contain 2 or more grams of carbohydrate to each gram of fat. The routine treatment of diabetes with the high carbohydrate diets does not differ in any way from the usually accepted methods, except that more insulin is required. As a routine the total amount of food is divided into equal amounts for each of the three meals of the day. Two doses of insulin are used, five-eighths of the total dose being given from fifteen to thirty minutes before breakfast, and three-eighths at the same interval before supper, with minor variations as necessary. When the insulin dosage is small, one dose may be given daily with two large meals following the insulin, and no insulin before the smallest meal. The acidosis diet consists of 90 gm. of oatmeal (dry weight), 300 cc. of skim milk and 1000 cc. of fruit juice. The oatmeal and skim milk are divided into three meals, and the fruit juice is given both with and between meals. In general, orange juice seems to be the most suitable, and often, especially if there is a tendency toward nausea and vomiting, lemon juice or grapefruit juice is mixed with the orange juice. Ample insulin is given, but no attempt is made to render the patient sugar-free on the acidosis diet. The patient is desugarized on a low diet. A typical diet as served consists of carbohydrate, 217; protein, 93; fat, 107; calories, 2203. The foods used are vegetables (including potatoes), eggs, bacon, lean meat, butter, bread, cream, fruit, dry cereal and whole milk.

## Medical Economics and Public Health

"We do not feel that it is the function of the educational authorities to practice medicine or dentistry by using school medical inspectors or dentists to render the services that should be given by practicing physicians and dentists," writes Dr. William A. Howe, chief of the Medical Inspection Bureau of New York State Department of Education. "There are, of course, instances throughout the state," continues Doctor Howe, "in which first aid attention is given to school children, but in every instance we endeavor to refer these children, through the parents, to either the family physician or dentist for treatment. It is rather the function of school authorities by means of school medical inspection to find physical and dental defects among school children and to notify parents of such defects and to advise that the family physician or dentist should be consulted as to treatment. *Our system of school medical inspection is one of detection rather than treatment of physical defects.* It might even be said to be one of production or stimulation of medical and dental service rather than one of participation in treatment. To be sure we endeavor to teach and train children to keep well, but in doing this we look to the medical and dental profession to assist us."

Thus we see signs of a returning sanity that we may expect to see reach the west coast in due course of time. Fads, like fancies and epidemics, travel so fast nowadays that the former long hiatus between the passing of the old and the oncoming of the new is disappearing.

We are indebted to Dr. Ray Lyman Wilbur for a marked copy of the New York Times containing the full text of Governor Smith's recent message to the legislature. A large share of this message is devoted to a sane and most encouraging discussion of the many problems of health. In fact, health might well be said to constitute the keynote of this document, unusual among its kind.

Governor Smith expresses a sentiment and a fact that most political leaders avoid or muss over when he says:

"I renew the recommendation of a year ago that careful consideration be given to the protection of the people of the state from unlicensed and unqualified persons practicing medicine. The co-operation of the medical profession is an essential factor in the protection of the public health, as well as in the care of the sick. A very large part of modern public health is urging people to get the advice of their physicians before serious and perhaps incurable conditions have developed. Such effort comes to naught if unqualified persons are allowed to hold themselves out as physicians."

"The subject is a difficult one, but the State of New York should take the lead in establishing high standards of medical practice and providing a practicable plan for their enforcement. It is a matter of justice to qualified physicians and of protection to the public."

"There is a prevalent, but not entirely sound, notion," believes Raymond Pearl (American Mercury), "that health and longevity are necessarily highly correlated together. This idea postulates in effect that good health, well taken care of, will necessarily ensure great longevity. The valetudinarian conducts his life in accordance with this philosophy. But curiously enough, real, thorough-going, 100 per cent valetudinarians rarely attain to great ages."

The League of Nations conducts its health section largely through what are called "Interchanges." Annual interchanges of selected public health officers from groups of countries and several special interchanges have been held during the last few years.

"In all 388 medical officers, representing forty-eight different countries, have participated in the interchange scheme since its inception. Under the scheme the league

takes over and enhances the work formerly carried forward through convention, congress, institutes and similar national and international health workers.

The next interchange, to which Doctor W. C. Hassler of San Francisco is a delegate, will be held in London, February 22 to April 3, 1926.

"The object of this interchange is to demonstrate the whole scheme of health administration in the greater London and adjacent counties, and to indicate the various problems concerning the health of those who live or work in London."

The program is as complete as the curriculum of a medical school and seems to be well balanced, but Hassler has promised to tell us all about it when he returns.

The modern physician is, or ought to be, the end product of a perfect civilization, writes Morris Fishbein in "Mirror of Medicine," a beautifully done pamphlet, which he sent to his friends as a Christmas greeting. He must combine, continues the author, the finesse of a diplomat, the eloquence of a lawyer, the impartiality of a judge, the decision of a general, the frankness of a witness and the astuteness of a man on trial for his life, with the precision of a mathematician, the imagination of an artist, the altruism of a philanthropist, and the tenacity of a pawnbroker in money matters. While he tries to analyze the idiosyncrasies of the uneducated rich, who seem to be peculiarly liable to medical delusions, he is kept busy trying to keep the still more uneducated legislators from legislating him into the poor-house. He must perhaps neglect the illness of some laborer who needs constant attention in order to coddle some convalescent melancholic who never was sick. He gets to see his wife and children every Sunday morning—whether they need it or not. Likely as not when he reaches his office he finds it full of people. He calls the first man in and is offered a set of the speeches of the world's greatest orators in ten volumes at one dollar down and one dollar forever. He calls the first woman in and is offered Collier's, Hearst's and Everywoman's for eight dollars a year. The next one wants a certificate alleging that he has been sick for three months so that he can collect from the union. Then there is an inspector from the Department of Internal Revenue who merely wants to look over the records, and finally a collector for a firm that "feathers your nest," trying to locate some bird who has escaped with the feathers. Obviously the doctor has had a profitable afternoon. Even a druggist hasn't got one-half the responsibility.

The few newspapers of California who sold space recently to the promoters of the "Hoxide Cancer Treatment" should read the report upon this scheme in the January 2, 1926, issue of the Journal of the American Medical Association, page 55.

It is to the credit of our newspapers that most of them refused this financially profitable advertising. It was not so easy to do, either, because of the rather deft approach that was used.

It seems that the licensed physician protectors these "cures" must have, for obvious reasons, are also becoming more difficult to get. The Hoxide crowd of Illinois did find a doctor in California, and they seemed to have the usual chance to make a clean-up until the American Medical Association investigators took all the joy out of life.

One interesting incident in the promotion of this "cure"! in California is illuminated by the following letter from Doctor Pinkham, Executive of the California Board of Medical Examiners:

San Francisco, Calif., January 2, 1926.

To the Editor—The Hoxide Cancer Treatment was first drawn to our attention the early part of December, 1925, when we received three or four inquiries, via telephone, one of which came from the Mercantile Trust Company, regarding the standing of Homer I. Keeney, M. D., who was reported in Taylorville, Illinois, posing as a cancer specialist and engaged in investigation of



the Hoxide Cancer "Cure" of which we had never before heard.

We then wrote a letter under date of December 4, 1925, to Doctor Keeney.

December 4, 1925.

"We have recently received three or four inquiries regarding Homer I. Keeney, who was stated to be in Taylorville posing as a cancer specialist, and we are wondering if you can give us any information."

On December 18th, Doctor Homer I. Keeney called at the office of the Board, presenting the letter referred to and explaining his visit to Taylorville, Illinois, his enthusiasm over the Hoxide Cancer "Cure," etc.

A few days later we received a clipping from the Taylorville (Ill.) Daily Breeze of Saturday, December 19, 1925 (the day following Doctor Keeney's visit above referred to), reading in part as follows:

"According to a telegram received here today, Doctor Homer I. Keeney, noted San Francisco surgeon, who investigated the Hoxide Cancer Cure here, went before Doctor Pinkham, Secretary of the State Medical Board of California, and explained what he had found here and received the approval of that official . . . ."

We thereupon wrote Doctor Keeney, also to the Taylorville Daily Breeze and to Mr. Edward A. Morphy, drawing attention to the above quoted untruth, and asking for a copy of any telegram which may have been sent, wherein the writer's name was used as approving the Hoxide Cancer "Cure."

Shortly thereafter Doctor Homer I. Keeney called, denying that he had sent any telegram following this interview, but stating that he had discussed the matter with Edward A. Morphy. We suggested to Doctor Keeney that we considered the importance of the matter sufficient to require his written reply which he promised to send.

Under date of December 30, 1925, Edward A. Morphy wrote us that he was sorry he had not kept a copy of the telegram sent to his brother, assuring us that the message contained no suggestion that the California State Board of Medical Examiners approved the Hoxide Treatment for Cancer and that he had sent no "dispatch or letter" to the Daily Breeze or any other newspaper in Taylorville.

(Signed) CHARLES B. PINKHAM, M. D.,  
Secretary-Treasurer.

The following copy of an advertisement of a small town merchant in a small town newspaper sounds clearly a high note in social ethics:

"Cheerful and genuine service is not a commodity, and therefore, is not for sale in the open market. It is that almost intangible something, which can hardly be classified or defined, which is freely and willingly given without the desire or purpose of securing a reward. It is *given and not bought*.

Though it comes *with* the commodity it is not a part of the purchase; it is not a part of the bargain or something which customers have a right to demand. It is the hour for which you cannot pay; it is contributed intelligence; it is the helping hand; it is good will reversed, something going out from one person to the other without any thought of compensation; it is of the spirit and from the spirit; handled properly it builds for the one dispensing it the *power of attraction* which draws people like a powerful magnet. May God bless those who render such service for they are real servants and benefactors of their fellow men."

The Tenth Annual Congress on Internal Medicine will be held at Detroit and Ann Arbor, week of February 22-27, 1926.

The congress is devoted to amphitheater, bedside and clinical laboratory demonstrations as well as to symposia dealing with modern phases of medicine. Distinguished guests from abroad, Canada and clinics of the United States will occupy places on the program. Four days will be devoted to the work at Detroit, and on one day the society will be the guest of the University of Michigan at the newly opened eleven hundred-bed University Hospital.

All physicians, who are interested in medicine and who are members in good standing of their local and national societies are cordially invited to attend the congress.

Hotel headquarters will be at the Book-Cadillac in

Detroit. Information regarding reduced railroad rates, program, hotel accommodations, etc., may be secured from the Secretary-General.

C. G. Jennings of Detroit is president, and Frank Smithies, 920 N. Michigan avenue, Chicago, is secretary.

Los Angeles has started work on a new hospital to cost eight million dollars and which will occupy some thirty-six acres of ground. The main hospital for acute illnesses will be twelve stories high, contain nearly fifteen million cubic feet and care for some 1600 patients.

When completed this undoubtedly will be one of the best hospitals, from a material point of view, in existence. The Supervisors and Doctor N. N. Wood, chief executive of this stupendous undertaking, are doing their best to provide scientific service for the sick in this palace, but this phase of their problem is so difficult that prophecies would be hazardous.

"If we compute each visit of the physician, in his charity work, as being worth a dollar," says a report from New York City, "we find that the bill would \$15,061,506 per annum, as the donation of the doctors to the public welfare.

"It must be remembered that even this sum does not in any sense measure the free service of which no accounting ever has been made or ever can be made—of the charity or free service that the physicians give to the poor whom they meet in their daily practice.

"Just what this bill would amount to," continues the report, "God only knows, because the physician never keeps account of it, and if you happen to mention it to him he will laugh it off, saying, 'Oh, that's for the good of the service—for the good of mankind.'"

"The institutional salaried doctor has come to stay. Army, navy, hospitals, dispensaries, asylums, industries, school systems and insurance companies are multiplying the demand for men and women who will devote themselves exclusively to social service on a salaried basis. Already a considerable percentage of the medical profession sustain a whole or part-time relation to institutions."—President Vincent, Ohio Medical Journal.

The Health of the Nation is reviewed in the annual report of the Surgeon General of the Public Health Service of the United States. Surgeon General Cumming says, among other interesting things in his letter of transmittal of the report:

"It is well known that a material increase in population produces a marked tendency to a more than corresponding increase in sickness and death, and this increase in morbidity and mortality will certainly follow an increase in population unless rational measures are enforced to prevent such occurrence. It is indisputable that had we not learned how to prevent, in great measure, many of our communicable diseases and were we not given the means of accomplishing this, our population would be swept from time to time by epidemics which would make those which have occurred in the past seem mild in comparison. \* \* \*

"It is not possible to consider the public health as being divided into forty-eight or any other number of territorial entities. A rural community in Texas or California may produce the cream of the market in vegetables, fruits, and other edible commodities, but unless such commodities are produced under good sanitary conditions the people of New York or Massachusetts may suffer as a consequence. The same is true of oysters and to a much greater degree of milk, except that milk is not shipped quite so far as are vegetables. Polluted water taken by a common carrier in one State might lead to outbreaks of disease in any number of other States. \* \* \*

"With present facilities for the rapid transportation of human beings by trains, vessels, automobiles, and even airplanes, a person may be exposed to a communicable disease in one State and develop the disease in any other State in the Union to which he may happen to go. Recently an example of the facility with which this may take place was brought to my attention. A national conference was being held in one of our Middle Western

States. Due to faulty connections in the water system of the little town where the meeting was held, the drinking water became contaminated, producing a local outbreak of typhoid fever. Subsequently no less than eight States reported cases of typhoid fever in individuals who had evidently contracted the disease from this infected water supply. \* \* \*

"Preliminary reports of births in the United States for the calendar year 1924 indicate slightly higher rates than those for the year 1923. In twenty-five States, 1,608,283 births were registered in 1924, which is 22.5 births per 1000 population. In 1923, the rate was 22.3 per 1000. The rates varied from 31.6 in North Carolina to 16.1 in Montana.

"Preliminary figures indicate that the death rate in the United States for the year 1924 was low. Twenty-nine States had an aggregate death rate of 11.9 per 1000 in 1924 and 12.4 per 1000 in 1923. In 1924 in these States the urban death rate was 12.4 per 1000 and the rural death rate 11.4. \* \* \*

"But little change is apparent in the number of deaths of mothers as a result of causes incident to childbirth during the last nine years for which data are available. The proportion of mothers dying from these causes in the birth registration area ranged from 6.1 per 1000 in 1915 to 9.2 in 1918. \* \* \*

"A study of the personality of drug addicts and of drug addiction in its relation to crime indicates that, during recent years, addicts in the United States have been recruited almost exclusively from nervously abnormal types of individuals who are peculiarly susceptible to addiction because of the unusual sense of mental relief and ease that narcotics give them. Criminals and psychopathic characters in general are prone to become addicts because of the calming effect of morphine or heroin upon them. The addicts in prisons are chiefly violators of recently enacted narcotic laws, and the large addict prison population is a necessary concomitant of those control measures that have been so successful in reducing the incidence of drug addiction."

"The 1926 foreign clinic assemblies, given under the direction of the Inter-State Post Graduate Assembly of North America, will cover a territory including the chief clinic cities of Italy, Switzerland, Germany, Austria, Czechoslovakia, Holland and Belgium. The members of the party will sail from New York on April 28th, a few days after the meeting of the American Medical Association at Dallas, Tex., thus giving the physicians of the party plenty of time to attend this meeting.

"The clinic cities to be visited are Paris, Rome, Florence, Padua, Milan, Berne, Zurich, Munich, Vienna, Prague, Berlin, Amsterdam, The Hague, Utrecht, Leyden and Brussels. The assemblies are open to members of the profession who are in good standing in their State or Provincial society with no restriction to territory. This invitation is understood to be extended to the entire medical profession of North America. Further information may be had from Doctor William B. Peck, Managing-Director, Freeport, Illinois."

Jenkel & Davidson Optical Company announce themselves to the medical profession thus: "Specializing in service to the ophthalmologist and, of course, doing no refraction, we are able to utilize our resources in filling oculists' prescriptions exclusively. Our long experience in making and adjusting glasses insures the utmost accuracy. You may be confident that in referring patients to us for glasses, they will be taken care of to their entire satisfaction and in protection of your interests." This firm is not practicing medicine and filling their own prescriptions. They only fill prescriptions and they are prepared to do so. Their card is appearing regularly in CALIFORNIA AND WESTERN MEDICINE.

By a new arrangement, the San Francisco store of R. L. Scherer Co., under the management of Mr. Paul Lipman, is featuring exclusively all accepted electrical equipment used by the medical profession, from an x-ray machine to cystoscope lamps; while the Los Angeles store is in addition carrying its usual full line of surgical instruments, equipment, metal furniture, etc. It is the aim of this company to have men available at both stores who

can intelligently advise the proper equipment best suited to the individual requirements. Their full-page announcement appears in this and other issues of CALIFORNIA AND WESTERN MEDICINE.

TWIN PINES, located at Belmont, California, is another of the ethical health-serving institutions recently admitted to the advertising columns of CALIFORNIA AND WESTERN MEDICINE. It is equipped and personned to co-operate with ethical doctors in an ethical manner in rendering essential service to neuropsychiatric patients.

THE ENLOE SANITARIUM for the treatment of tuberculosis, located in Paradise, California, sixteen miles from Chico, is now found regularly in the advertising columns of CALIFORNIA AND WESTERN MEDICINE. This ethical health-serving institution is prepared to co-operate with doctors in ethical service to tuberculous patients.

**Gastric Acidity in Syphilitic Children**—Twenty-one children, from 4 to 13 years of age, with positive Wassermann reactions, who were under treatment with neosarsphenamine for varying periods, were studied by Maurice Dorne, W. A. Brams and I. Harrison Tumpeer, Chicago (Journal A. M. A.), with regard to their gastric acidity. As a group these syphilitic children manifested a value of 9.5 free acidity against 19.4 of the controls, proportionately 50 per cent. Total acidity values are 24.9 against 41.6, a proportion of 60 per cent. From the standpoint of individual cases, one of the twenty-one syphilitic children gave a free acidity above the normal average, 19.4, as compared with seven of the seventeen controls, or 44 per cent against 41 per cent. There were twenty of the twenty-one syphilitic children below the normal free acidity average, as compared with ten of the seventeen controls, or 95.6 per cent against 59 per cent. This analysis indicates that the syphilitic child is, approximately, one-tenth as likely to manifest free acidity above the normal average (44 per cent against 41 per cent) and, approximately, twice as likely to manifest lowered acidity as the normal child (95.6 per cent against 59 per cent). As regards total acidity, three of the twenty-one gave values above the normal average, 41.6, as compared with seven of the seventeen controls, or 13.7 per cent against 41 per cent. Below the normal total average were eighteen of the twenty-one syphilitic children compared with ten of the seventeen controls, or 86.3 per cent against 59 per cent. This analysis indicates that the syphilitic child is approximately one-third as likely to manifest total acidity above the normal average as the normal child and approximately half again as likely to run below the normal average. The findings of Neugebauer are substantiated in these observations in children. Viewed from all angles, the data demonstrated lowered acidity in the gastric contents of syphilitic children.

The Children's Bureau of the United States Department of Labor has "released" the startling information (?) that they have devised "a set of six charts on posture standards for boys and girls, intended for the use of physicians, nurses, physical-education teachers, and clinics."

The bureau, in explaining their posture standards, announce that "in excellent posture, the head is up and the chin in; in good posture the head is slightly forward, in poor posture it is forward, in bad posture it is markedly forward. In excellent posture the chest is up and the breast bone is the part of the body farthest forward, in good posture the chest is slightly lowered, in poor posture it is flat, in bad posture it is depressed or sunken. In excellent posture the lower abdomen remains in and flat, in good posture it is in but not flat, in poor posture it is relaxed and is the part of the body farthest forward; in bad posture it is completely relaxed and protuberant. In excellent posture the curves of the back are within normal limits, in good posture they are slightly increased, in poor posture they are exaggerated, in bad posture they are extremely exaggerated."

Walk up, doctor, and avail yourself of this interesting "information" in the development of standards. It's free; at least it's what the government spends your tax money for.



## California Medical Association

EDWARD N. EWER, M. D., Oakland.....President  
W. T. McARTHUR, M. D.....President-Elect  
EMMA W. POPE, M. D., San Francisco.....  
.....Secretary and Associate Editor for California

### CALIFORNIA MEDICAL ASSOCIATION OAKLAND MEETING

The next meeting of the California Medical Association will be held in Oakland, April 26 to May 1, 1926.

Oakland, on account of its central location, is easily accessible to members from all parts of the state.

Accredited hospitals are available for holding the pre-convention clinics, which are to be conducted by men nationally known in medicine and surgery.

The committee of arrangements are planning many and various forms of entertainment for members and guests. Golf tournaments will be held and conducted by the Northern California Golf Association and many valuable trophies and prizes will be awarded.

Other social features will be receptions at the Country Clubs, teas and luncheons; motoring and boating as well as a dinner dance at the Hotel Oakland and smoker and athletics at the Athens Athletic Club. Guest cards will be issued to the members and guests at the various clubs.

Rates of hotels in Oakland for the California State Medical Association, April 26 to May 1, 1926:

HOTEL—	SINGLE DOUBLE (With Bath)		SINGLE DOUBLE (Without Bath)	
Oakland .....	\$3.50 to \$7.00	\$5.00 to \$10.00	\$2.50	\$3.50 to \$4.50
Coit .....	3.50	4.50		
		5.00 (Twin)		
Harrison .....	3.00	4.00	2.00	3.50
		4.50 (Twin)		
Key Rt. Inn .....	2.50	3.50	1.50	2.50
Menlo .....	2.50	3.00	1.50	2.50
Royal .....	2.50	3.00	1.50	2.00
St. Mark .....	2.50	3.00	2.00	2.50
San Pablo .....	2.50	3.00	1.50	2.00
Sutter .....	2.00	3.00	1.50	2.50
Touraine .....	2.50	3.00		
		4.00 (Twin)		

The Hotel Oakland has been selected as headquarters for the meeting. Please make your reservations with the Hotel Reservation Committee, care of Hotel Oakland.

Space for exhibits is available to advertisers in CALIFORNIA AND WESTERN MEDICINE, and information regarding floor plan and rates may be obtained from the Hotel Oakland.

CLARENCE A. DEPUTY, M. D.,  
Chairman of Arrangements Committee.

### ALAMEDA COUNTY

Alameda County Medical Association (reported by Pauline S. Nusbaumer, secretary).—The annual meeting of the Alameda County Medical Association was called to order by the president, H. B. Mehrmann, in the Ethel Moore Memorial Building, December 21, 1925, at 8:15 p. m. Minutes of previous meeting read and approved. The scientific program was as follows: 1. "Chronic Human Amoebiasis," by L. M. Boyers; 2. "Pitfalls in Microscopic Diagnosis of Human Amoebiasis," by Charles A. Kofoid, Professor of Zoology, University of California (by invitation); 3. "Surgical Treat-

ment of Gastric and Duodenal Ulcer," by Emmet Rixford, San Francisco (by invitation). "Chronic Human Amoebiasis" was presented by Doctor Boyers as a definite clinical entity, protean in character and permitting a clinical diagnosis, in most cases before laboratory confirmation is obtained. This clinical diagnosis is based on the nature of the complaint and account of the present illness, the past history, physical examination, the proctoscopic and sigmoidoscopic examinations, the gastro-intestinal roentgen examination, the lack of finding or findings in the blood picture and urinalysis. The laboratory confirmation is obtained through fecal duodenal examination and occasionally through tissue section. A list of tissues found affected both in Berkeley and in the literature of the subject was given. The significance of the finding of both motile and encysted endamoeba in the liver area was emphasized.

A statement was made that in the experience of the Berkeley workers no true carriers had been found to date since those who harbored the infecting organism showed also definite tissue damage.

Modes of conveyance of the infection were considered. Within the body there seem to be a possibility of its having some affinity for mesodermal derivatives.

The various therapeutic agents were considered and their administration divided into three periods: (a) Diagnostic period, (b) An eradication period, (c) A post-eradication period or recovery period.

In conclusion insistence was laid on the necessity for early treatment, that is, both early in the course of the disease and early in the life of the patient.

In his talk, "Pitfalls in the Microscopic Diagnosis of Human Amoebiasis," Professor Kofoid said that clinical microscopists, examining stools for the diagnosis of infections by endamoeba dysenteria, should rely upon the encysted stages for the detection of the infection. The motile phases of this amoeba, which occur most abundantly in acute dysentery, are with difficulty distinguishable from the motile phases of at least three other cysts found in the human bowel, notably from councilmania laffeurii, which also has large clear pseudopodia and will also ingest red blood corpuscles. Reliance should be placed upon encysted stages which have passed through the nuclear division and have come to the equilibrium of the completed encysted stage. In such stages the nuclear structures of the different species of amoebae found in the stool are characteristically different and diagnosis can be made with great accuracy.

The microscopist must be on his guard against multiple infections involving the occurrence of encysted stages of both flagellates and amoebae, and also against the occurrence of molds, fungi, yeasts, and the introduced cysts of the protozoa of the fresh water fauna. He must therefore rely upon stained slides and must know the characteristic nuclear pictures of the pathogenic organisms. It is essential that he should understand other than the pathogenic infections in order to avoid false diagnoses.

To this end carefully stained preparations fixed in Schaudinn's fluid and stained in iron haematoxylin, with the best possible optical equipment and uniformity of illumination are helpful. The examination of fresh smears assists in the detection of motile phases, and Donaldson's iodine-eosin stain helps in the detection of the presence of infections, but is not critical for their individual diagnosis. Only smears stained in iron-haematoxylin should be used for this.

Detection of motile stages and cysts in duodenal drainages is best made on the material fixed in Bouin's fluid and stained by the centrifuge method in iron-haematoxylin. Long search and careful elimination of leucocytes in all stages must be practiced.

In the routine of the detection of infections by intestinal protozoa it is desirable to examine six consecutive stools for the purpose of detecting cysts in the occasional flares in number which occur in these infections. It is much more profitable to search a series of six stools than to examine one intensively. Special care is necessary in the detection of the small race of endo-

moeba dysenteriae which often occurs in long-standing, chronic cases. These cysts are about 6 to 8 microns in diameter, though occasionally they may be as small as 4 microns. They are often less abundant and approach in size the common intestinal yeasts. One must know thoroughly the intestinal yeasts. The cysts of the amoebae are distinguished by their sphericity, the nature of their cytoplasm, and their characteristic, heavily rimmed nuclei with the central spherical karyosome. Occasionally the rod-like chromatoidal bodies are to be found in these small cysts. Cysts with four nuclei may be less abundant in the infections with the small race than in the larger races.

It is especially important where microscopic diagnosis is made to collaborate with the physician and to continue the search whenever there are clinical indications of the infection. The administration of bile salts during the period of stool examination has proven to be helpful in decreasing the time required for the detection of the infection.

In discussing his subject, "Surgical Treatment of Gastric and Duodenal Ulcer," Doctor Rixford gave a brief history of the development of surgical treatment of ulcer, mentioning the fact that the early efforts were directed to the phenomena of stenosis. The pioneering work in this subject was done by Billroth and his pupils. Wolfner performed the first gastroenterostomy, Von Hacker the first posterior gastroenterostomy, Heineke-Mikulicz the first pyloroplasties for benign stenosis.

Little was known of the symptomatology of duodenal ulcer and the relative frequency until the early years of this century. Formerly knowledge of ulcer was chiefly from the post-mortem statistics. Recently the correlation of symptoms and ulcer as found at operation has given an entirely new basis of attack on the lesion.

Ulcer of the duodenum is approximately three times as common as ulcer of the stomach, but cancer, while common in the stomach, is almost unknown in the ulcer bearing area of the duodenum. Therefore surgical treatment should keep in view the possibility of an ulcer of the stomach becoming cancerous and for this and other reasons the only proper surgical treatment for gastric ulcer is excision. Excision of an ulcer of the lesser curvature by a diamond shaped cut taking a part of the posterior as well as the anterior surface of the stomach in order to distribute the tension of the stitches is objectionable because through interfering with the nervous mechanism the part of the greater curvature opposite dilates and becomes muscularly inefficient. To remedy this the so-called sleeve resection has been performed, but because of technical difficulty and recurrence of ulcer it has been practically done away with, an extensive excision and pylorotomy having been substituted.

Duodenal ulcer is not infrequently cured by medical means and therefore surgery should not be considered as the only method of attack nor as the first to be tried. Duodenal ulcer should probably be considered a surgical disease if medicine has failed in the individual case.

Gastroenterostomy is often criticized as not being the last word in the treatment of duodenal ulcer because of recurrence and persistence of symptoms in too large a proportion of cases. Such sequelae as stenosis of the stoma with a part of the meal passing out by the pylorus as shown by the x-ray, keeping up the irritation on the ulcer, or through hyperchlorhydria causing recurrence of ulcer or jejunal ulcers beyond the stoma. Moreover gastroenterostomy requires nice mechanical work and not every one does the operation well. The stoma should be placed far enough to the right to throw out of function the muscle of the pyloric antrum. It should not be so far as to make undue traction on the transverse mesocolon. The stoma should be ample in size and ample precautions taken against obstruction in the efferent loop. Such obstruction may be due to kinks, twists, to herniation through the opening in the transverse mesocolon, to traction on the transverse mesocolon, to contraction of inflammatory tissue caused by leakage or soiling, etc. Such obstruction gives rise to the phenomena commonly described as vicious circled. Obstruction also causes gastric tetany.

Many operators find it advantageous to make an

anastomosis between the afferent and efferent loops. Perhaps, a lateral anastomosis or an implantation of the afferent loop into the side of the efferent loop, the Y operation of Roux.

The operators of Southern Europe are apparently performing extensive excision in duodenal ulcer as well as in gastric ulcer, taking away not merely the pylorus but a large part of the stomach to such an extent as to make one think that they are guilty of following a fad. The reason alleged for the excision is the frequency of occurrence of jejunal ulcer following gastroenterostomy. But apparently such ulcer forms in only 5 per cent of the cases where gastroenterostomy is well performed. A part of these ulcers is pretty certainly due to crushing of the mucous membrane by clamps. For this reason many operators have discarded the use of the clamp on the jejunum. The neatest operation for pylorotomy by partial gastrectomy that Rixford saw in a recent trip to Europe was by Schumaker of The Hague. A pair of very cleverly devised clamps permitted excision of the portions of the stomach to be removed without soiling and at the same time permitted suture before removal of the proximal clamp.

It would seem that so extensive an operation as removal of one-third or one-half of the stomach with the pylorus is hardly warranted by so small a lesion as a superficial duodenal ulcer, especially in view of the fact that such ulcers are sometimes cured by medical means and in more than 90 per cent of the cases are cured by gastroenterostomy. Therefore it would seem more rational for gastroenterostomy to be tried first and excision performed only in case the gastroenterostomy fails.

For deep crater ulcers excision is more clearly indicated, but in these excision is fraught with much more danger because of the large proportion of the cases in which the ulcer has invaded the pancreas and its excision necessitates traumatism to the pancreas with consequent leakage of pancreatic fluids causing fat necrosis, etc. Moreover, even the cautery does not always insure against infection. The principle on which the operators of Southern Europe are performing extensive resection is that irritation of the pylorus through the nervous mechanism stimulates the mucous membrane of the fundus of the stomach to secrete more hydrochloric acid and that excess of acid is the real cause of recurring ulcer, jejunal ulcer, etc.

Two cases in Doctor Rixford's personal observation are suggestive in this regard; one where gastroenterostomy had been followed by ulcer of the stomach at the edge of the stoma where afterwards the Balfour operation on the ulcer had failed, where hyperchlorhydria persisted, and in a fourth operation jejunal ulcer was found. Symptoms entirely disappeared after the radical removal of the pyloric end of the stomach. In another case in which, following a sleeve resection, therefore with retention of the pylorus detached from the rest of the stomach, hyperchlorhydria still persisted to such an extent that there was recurrence of ulcer in jejunum and stomach, the latter perforating. In this case, it should be added, fatal secondary hemorrhage occurred after eight or nine days. In general it should be assumed that post-operative hemorrhage is from the operative wound and not from the ulcer, though as in this case it may sometimes be from the ulcer. It is better to revise the operation and make sure.

In Italy, in the Polyclinic Hospital in Rome, Biaggi has made a long series of experiments on recurrence of ulcer after various operative procedures in dogs. These would seem to confirm the notion of the influence of the pylorus on the production of acid. That such production of acid must be through the mechanism of the sympathetic nerve has led Schiazzi to devise an operation designed to throw out of function the sympathetic nerves between pylorus and fundus, with what success it is too soon to state. Schiazzi's paper was translated by Doctor De Vecchi, formerly of San Francisco, and is published in the *Annals of Surgery*.

One point should be emphasized in the practical treatment of gastric and duodenal ulcer and that is that foci of infection should be cleaned up; teeth, tonsils,



adenoids, sinuses and in abdominal operation the appendix and gall bladder should be carefully studied and the former removed in any case and the latter if found diseased.

Report of president, report of secretary-treasurer, report of chairmen of all standing committees, report of tellers.

Election resulted as follows: J. K. Hamilton, president; George Rothganger, vice-president; P. S. Nusbaumer, secretary-treasurer; L. P. Adams, T. J. Clark, F. M. Loomis, Gertrude Moore, G. G. Reinle, D. N. Richards, councilors; Daniel Crosby, S. V. Irwin, H. B. Mehrmann, C. H. Miller, delegates; F. H. Bowles, C. T. Devine, R. A. Glenn, Channing Hall, George McClure, W. B. Palamountain, R. T. Sutherland, alternates. After installation of the new officers, the meeting adjourned. Light refreshments were served and a social hour enjoyed.

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## SACRAMENTO COUNTY

**Sacramento County Society for Medical Improvement** (reported by Bert S. Thomas, secretary)—The annual meeting of the Sacramento Society for Medical Improvement was called to order by President Scatena in the gold room of the Sacramento Hotel, December 15, 1925. There were thirty-six members in attendance.

The report of the Board of Directors was rendered by Scatena. He spoke on the following subjects:

1. Attendance—Throughout the year the meetings have been well attended despite the fact that at one meeting the number was but twenty-five. One meeting was the best attended regular meeting ever held by the local society. There were fifty-eight doctors in attendance. Yet, a goodly number of the older familiar faces were lacking at many meetings. Our president believes that a deal of good comes from these gatherings and, before leaving office, desires to admonish these men to attend regularly.

2. Papers—With the exception of a paper by Pottinger, the suggestion of the last two years of having local men for the scientific program, was adhered to. One clinic at the County Hospital was of real value.

3. Annual Banquet—That of this year was a success. Nevertheless, it is recommended that the March meeting be divided into two sessions; one strictly a scientific meeting, the other the banquet proper.

4. New Members—It is, indeed, satisfactory to note the increase of thirteen members with the transfer of but one to another society.

5. Board of Directors Meetings—It has been found that the noon meetings of the Board of Directors is decidedly more provocative of a good attendance than evening ones.

6. Meeting Places—The advisability of one meeting place, such as the County Hospital, was suggested.

7. Attitude Toward Charities—Our attitude towards the Red Cross and other charity workers is reflected by the attitude of our director. The president believes that this should be a conciliatory one rather than one of opposition, and asks that all members get behind the decision arrived at by the director.

The secretary's report showed an active membership of 117. It also showed a balance on hand of \$540.81, an increase of approximately \$145.00 over that on hand at the start of the year. This resulted from the fact that there was no contingency to draw on the treasury during the year. Therefore, the same dues as last year were recommended for this.

**Nomination of Officers**—For Directors: Schoff, Scatena, Dunlap, Lyman, Hale, Young, Drysdale, Gundrum, Binkley, Cress, Klick and W. R. Briggs were nominated; Schoff, Dunlap, Lyman, Hale, Drysdale and W. R. Briggs being elected.

**For Delegates**—Harris, Scatena, Farrell and Dunlap were nominated. Harris and Scatena being elected.

**For Alternate Delegates**—Thomas, C. B. Jones, Foster and George Hall were nominated. Thomas being de-

clared elected with no other having a majority. A third ballot showed Hall elected.

**For Secretary**—Thomas was elected by a vote cast by the president.

It was moved, seconded and carried that the assessment for 1926, as recommended by the Board of Directors, be \$15.00. \$10.00 for State dues and \$5.00 for local dues.

**Under General Discussion**—Dunlap stated that the county hospital was at the disposal of any individual doctor of the society, or for the use of the society itself.

Parkinson spoke on our relation to the social agencies, child welfare workers and so forth.

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## SAN BERNARDINO COUNTY

**San Bernardino County Medical Society** (reported by E. J. Eytting, secretary)—The meeting was called to order by the president; minutes of the previous meeting read and approved.

**Applications for membership**: Glen Curtis, Loma Linda, Walter E. Macpherson, Loma Linda.

The question of medical publicity was brought up and referred back to the board of councilors, for more definite information.

The following changes in the constitution was unanimously carried:

**Article 3**—Honorary membership may be conferred at the pleasure of the society. Such members are exempt from payment of dues and are ineligible to vote. Affiliate members shall be elected from those doctors of medicine eligible for active membership, but who are, for any reason, satisfactory to the county society and the council of the state association, entitled to special consideration. Those members shall have all the rights and privileges of other members, except the right to vote or hold office. Their dues to the state association shall be \$1 per year, and their dues to their county shall be fixed by such county society.

**Program of the evening** was "A Symposium of Appendicitis," by R. S. Cummins, Henry Snure, E. C. Moore of Los Angeles. In the absence of Moore, his paper was read by Doctor Hilliard, and in the absence of Hill, the discussion of this paper was opened by Eytting.

Forty in attendance, fifteen of whom were guests.

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## SAN DIEGO COUNTY

**San Diego County Medical Society Notes** (reported by Robert Pollock)—The members of the San Diego medical profession enjoyed a scientific gorge during the week of January 3 to 9, inclusive; during which Henry Sewell of Denver gave an interesting course of lectures at the county hospital auditorium. These lectures covered the entire field of physiology, tracing the history of the development of physiologic research and dwelling particularly upon our modern knowledge of such subjects as respiration, circulation, metabolism, and endocrinology. His lecture on the influence of climate, or environment, in health and disease upon the physiologic workings of the body, was a masterpiece. These lectures drew large and appreciative audiences, and it is hoped may foreshadow many interesting courses on medical science in the years to come.

The officers of the Mercy Hospital staff elected for 1926 are as follows: President, Thomas O. Burger; Vice-President, E. H. Crabtree; Secretary, W. W. Russell. Executives: Frank H. Carter, H. C. Oatman, C. M. Fox, T. F. Wier.

It was decided at the last meeting of this staff to hold regular meetings the third Tuesday of each month for the presentation and study of cases and the discussion of problems of hospital betterment.

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## SAN FRANCISCO COUNTY

**San Francisco County Medical Society** (reported by T. Henshaw Kelly, secretary)—Proceedings of the San Francisco County Medical Society—During the month of December, 1925, the following meetings were held:

**Section on Medicine**—Tuesday, December 1—E. L. Bruck elected chairman for 1926. Some new ideas about

hypertension—W. C. Alvarez. Drag out those lions—Saxton Pope.

Annual Meeting—Tuesday, December 8—Reports of officers, committees, and board of directors. Announcement by president of result of election of officers for 1926: President, Frank Hinman; First Vice-President, H. K. Faber; Second Vice-President, Ina M. Richter; Secretary-Treasurer, T. Henshaw Kelly; Librarian, Leo Eloesser. Directors: H. E. Alderson, Leo Eloesser, W. S. Franklin, E. S. Kilgore, Emmet Rixford, H. A. L. Ryfkogel, and I. W. Thorne. Delegates: Edmund Butler, W. E. Chamberlain, W. B. Coffey, W. S. Franklin, J. H. Graves, T. H. Kelly, E. S. Kilgore, W. P. Lucas, A. C. Reed, F. H. Rodenbaugh, H. A. L. Ryfkogel, I. W. Thorne, V. G. Vecki, and J. H. Woolsey.

Statement of the medico-military situation in California, and the duties of patriotic medical men—J. Wilson Shiels. Experiences of a reserve officer—Clarence Quinan. Professional problems of evacuation and general hospitals in time of war, and a short demonstration of field splinting for transportation—Major T. W. Burnett. Discussion of duties of medical reserve officers in connection with the various medical reserve units and of duties of medical reserve officers in general—H. C. Naffziger, J. H. Woolsey, M. R. Gibbons.

Section on Surgery—Tuesday, December 15—I. W. Thorne elected chairman for 1926. Hysterectomy for carcinoma of the uterus—F. W. Lynch. Cesarean section; a review of seventy-six cases from the Women's Clinic, Stanford University Medical School—C. S. Sullivan.

Section on Urology—Tuesday, December 29—Melville Silverberg elected chairman for 1926. Fluoroscopic aid in pyelograph—W. W. Cross. Recent urological advances and methods in Europe—C. P. Mathe.

St. Luke's Hospital Staff—Doctor Dudley Smith addressed the St. Luke's Hospital staff at a regular monthly luncheon meeting upon "The Importance of Routine Rectal Examination." He stated that a surprising number of pathological conditions in this region is overlooked, although the technic of examination is easy to acquire. Without producing any local pain, on account of the lack of sensory innervation of the rectal cavity, many diseased conditions may progress to an astonishing degree and can only be discovered early if physicians include a careful survey of this region in all general examinations. While no pain referable to the rectum may be present, pain referred to other regions such as the genitalia, urinary organs, sacrum, sciatic nerves or the inguinal region will cause the observant physician to look for rectal disease. This is especially important in cancer of the rectum, because many cases are overlooked, even when minor operative procedures are done for such conditions as hemorrhoids, fissure, fistula. This is a severe indictment of the profession. Such practice is an injustice both to the profession and the patient. No physician would treat diseases of the eye, throat or vagina, for example, without direct inspection, nor would he treat a cough without a careful examination of the chest. Yet so common a condition as chronic constipation is usually treated without examination of the rectum when it is frequently due to mechanical causes which are easily remedied. Neglect of physicians to properly examine and treat rectal cases has left the field, in the past, largely to the quacks and irregulars.

St. Joseph's Hospital Staff Meeting—Doctor Walter C. Alvarez spoke January 13 before the St. Joseph's Hospital Staff on "The Taking of a Gastrointestinal History," abstracted below:

The taking of a gastrointestinal history helps tremendously in making a diagnosis. The principal complaint is of the first importance and must be ever kept in mind in the treatment. Determine if the indigestion is primary or secondary. Study the onset—whether it is a flaring up of a cholecystitis or ulcer, or a constant thing of the neurosthenic. Get the preliminary to the first attack and follow up every clue to the end. It is more important to do this than to dose patients with pepsin or bismuth, which I seldom use. Sometimes bromides are needed early for sleeplessness. Childhood diseases may explain late adult lesions. Is the condition getting worse or more frequent and is it a medical or surgical case? Pain must

be ascertained accurately and whether it is fixed or radiates. Does it waken the patient at night (organic)? Is the patient afraid to eat, as in gall bladder disease? Have the patient point to area of pain and where it radiates to and if there are two pains. What causes the pain and is it removed by food or passing gas? The gas due to overexertion often points to heart disease and is worse in sedentary people on Monday on account of garden or other work done on Sunday. Does jolting bring on the pain, as in cholecystitis? Is soda beneficial, as in many organic lesions. The passing of mucus suggests colitis. The *reversed peristalsis syndrome* (vomiting, regurgitation, belching, nausea or heartburn) is often present in organic diseases. Vomiting may be easy and come on immediately p. c., as in many functional conditions, or before breakfast (alcoholism and t. b. coughing). If food taken long before is vomited, pyloric lesions needing surgery are indicated. Blood vomiting is rare in ulcer, but more common in cirrhosis of the liver or carcinoma of stomach. *Loss of weight* must be compared with the diet taken, non-protein often causing it. *Nausea* often means a lesion low down in the alimentary tract or pelvis (chronic appendicitis, gall bladder, neuroses or fibroids). Belching may be spontaneous or voluntary, latter due to swallowing air. Coated tongue is due to regurgitated food from the stomach and bad breath may be from reversed waves. The *fullness feeling* is a form of reversed peristalsis and may indicate chronic appendicitis. Bilioussness is a gall-bladder sign. Flatulence is real or assumed. If foul it is due to decomposition of proteins. Bloating often means gall-bladder disease or intestinal parasites. *Constipation* is often fanciful, and must determine definitely. Cancer of rectum or fibroids may cause it. Bleeding from bowels is not always due to piles if latter are present. Autointoxication clears up with cleaning out of bowel. Habits and previous operations must be considered. *Diarrhea* may be functional or organic. Don't give castor oil too freely. Colitis causes nocturnal diarrhea as a rule. Tenesmus is relieved with movement. If the diarrhea is worst in the morning, give HC., as it is often due to hypochlorhydria. Milk is not good in diarrhea. Bran and ameba are causes, but treatment of the latter is stressed unduly. Man's intestine is carnivorous, probably only seven feet long, and bran cannot be handled as by the longer intestine of herbivorous animals. *Syndromes* are distinguished as alimentary and non-alimentary. Digestive symptoms are due to the breaking down of the motor apparatus, rather than to trouble with pepsin or HC. Hypertension, tuberculosis and pelvic disease often cause most of stomach signs, the cardiac end being often silent. Diverticulitis of the colon is quite common. It is often revealed a week after the barium meal has been given. Neuroses are decreasing as our diagnostic ability is increasing.

Answering R. M. Berndt's question, stomach bleeding may occur in appendicitis, cholecystitis, varices, hypertension, and such diseases as Banti's. To W. T. Cummins' inquiry, I answer that cancer may follow upon an ulcer or come out of a clear sky.

Case reports were presented by F. Lowe, R. Grant, and A. S. Musante.

On February 10, C. O. Southard, Walter Smith, L. Overstreet, E. Gehrels, H. B. Carey, and C. E. Taylor will give cases of atypical mastoids, fistula, acute abdomen, and ruptured liver during labor.

Franklin Hospital Clinical Society (reported by Ewald H. Angerman, secretary of staff)—The clinical meeting of the Franklin Hospital Clinical Society was held on December 21 at the hospital, Frank R. Dray, presiding.

The speakers of the evening were Ernest Gehrels, who chose for his subject, "Surgical Treatment of Cancer and Ulcer of the Stomach," and George W. Hartman, recently returned from Europe, who gave a description of hospitals and clinics in England, Ireland, Scotland, France and Germany.

A resume of Doctor Gehrels' talk follows:

For the radical operation of cancer Gehrels has been employing the Polya modification of Billroth (2) which allows more radical removal of the lesser curvature than the original Billroth (2) method. Splanchnic anaesthesia



is employed as a routine for the cancer cases, the danger of fatal pneumonia being much less. While the mortality of the radical operation of cancer is still high (20 per cent), the late results are encouraging, giving 25 per cent cures over five years after a radical operation in the experience of Payr, Finsterer and others.

In discussing the surgical treatment of ulcer of the stomach he emphasized the late dangers after gastroenterostomy: bleeding, perforation, cancerous degeneration and peptic jejunal ulcers. Fifty per cent of the patients have been found to have recurrence of symptoms sooner or later. Especially for the bleeding ulcers and the penetrating ulcers distant from the pylorus gastroenterostomy has been disappointing.

Gehrels has done forty-three partial gastrectomies for ulcer (17 transverse resections, 23 Polya operations, 2 Billroth 1, Goepel, 1 Schmieden stepshaped resection) with three deaths. The fundamental points for the operation of gastric ulcer in order to obtain good permanent results are the removal of the ulcer and of the pyloric part of the stomach, hereby removing the element of pylorospasm and reducing the acidity of the stomach.

By this procedure 90 to 95 per cent of the patients can be permanently relieved of all symptoms, the mortality of the radical operation can be reduced to 5 per cent and less. Operation is indicated only for those patients who have proved to be incurable by medical treatment.

Doctor Hartman spoke of the general status of the British hospitals, which he found good, especially in the manufacturing towns in the north of England. They were not so good in the south of Ireland, but better in the north of Ireland. All British hospitals are greatly handicapped for lack of funds. Clinics and clinicians are good, especially in technique. The hospitals of Edinburgh are splendid and studying opportunities good, with large clinical material.

France impressed the speaker with the simplicity of their operating room technique. The surgeon usually has only one assistant and no scrubbed-up nurses. Their results are good, but there are occasional mistakes in diagnosis because of the hasty manner in which they work up their cases.

London and Paris have wonderful medical museums.

Germany is making good progress despite poverty. Many new surgical instruments are being perfected, including boilable cystoscopes. There is not much being done with radium in Germany, they having so little. Malignancies of the bladder are treated with diathermy, trichloroacetic acid, or excision.

Irving S. Ingber was chosen chairman, and George Becker secretary for the year 1926.

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### SAN JOAQUIN COUNTY

San Joaquin County Medical Society (reported by Fred J. Conzelmann, secretary)—The regular meeting of the San Joaquin County Medical Society was held Thursday, January 7, 1926, at the headquarters of the local health district, 129 South American street, Stockton. The meeting was called to order at 8:30 p. m. by the retiring president, John J. Sippy.

Forty were in attendance. Those present were: J. W. Barnes, E. L. Blackmun, J. F. Blinn, H. J. Bolinger, C. A. Broadus, H. S. Chapin, F. J. Conzelmann, J. V. Craviotto, J. T. Davison, J. F. Doughty, C. F. English, F. T. Foard, O. H. Garrison, Minerva Goodman, E. C. Griner, S. Hanson, J. P. Hull, H. E. Kaplan, G. H. La Berge, Grace McCoskey, R. T. McGurk, W. T. McNeil, F. J. O'Donnell, B. J. Powell, H. E. Price, S. F. Priestly, D. W. Ray, G. H. Rohrbacher, G. H. Sanderson, J. J. Sippy, H. Smythe, Margaret Smyth, C. V. Thompson, A. L. Van Meter, G. J. J. Vischi, and Frank W. Lynch, speaker of the evening, and Doctors Biethan, Spencer and Weiss as guests, and Mr. L. W. Drury, representative of the "Stockton Record."

The minutes of the previous meeting were read and approved.

The retiring president introduced the new president, H. S. Chapin, who had served the society as secretary-treasurer for three years.

The chairman presented the new secretary.

The chairman introduced Mr. L. W. Drury of the

"Stockton Record," who spoke on professional advertising, and requested permission from the society to publish a series of articles in the "Record" presenting problems of the medical profession to the public. Mr. Drury read two short articles illustrating what he intended to print. Barton J. Powell moved that the matter be referred to the board of directors, seconded and carried.

The chairman introduced the speaker of the evening, Frank W. Lynch, of the University of California, who spoke on "Indications and Technic for Cesarean Section." The speaker deplored the fact that America lagged behind in the methods of teaching obstetrics. In the care of maternity problems America is only ahead of Switzerland and Spain. Complications in obstetrics are a terror to all obstetricians. Cesarean Section is the simplest, even in the hands of skillful operators, and under favorable conditions is too frequently disappointing. Many patients do not stand the operation well; the reason is obscure. There are many avenues for infection in obstetrics. The operation for cancer of the uterus is very difficult, but the death rate is lower than in Cesarean. The speaker referred to Saenger's operation as the classical one; it is not the method, but that Saenger introduced sutures. The Fritch incision has no advantages. The Davies operation is high in the abdomen. The speaker preferred the low operation as the most favorable for the patient. He spoke in detail about the technic of the operation, and discussed the methods of preparation of the patient for operation, which is exceedingly important, and includes prenatal. The doctor illustrated his lecture with lantern slides in showing the results of 115 patients of his own cesarean section. Pituitrin may be used; it is not important when the incision is low. Bleeding may be terrifying. Adenomyoma of uterus may follow cesarean section. Once a cesarean section, always a cesarean section; do not trust the scar. The doctor has done cesareans as high as five times on the same woman. He believes three times sufficient, and usually ties off the tube at the third. The indications may be relative or absolute. Absolute when no other method is possible, and relative when other methods must be considered. Indications are: large child with no engagement; placenta previa; toxemia, not eclampsia; cardiac conditions; first pregnancy in elderly women; tumors of the uterus; pelvic obstructions are the chief indications for cesarean. Cesarean section for placenta previa as a routine is not justifiable. Pelvic obstructions are rare; therefore cesarean section is rarely needed. Speaker did not recommend cesarean for a dead foetus. He stressed the great value of prenatal care as a great factor in reducing the mortality rate. S. F. Priestly, C. F. English, R. T. McGurk, A. R. Van Meter, and W. T. McNeil, took part in the discussion. Doctor Lynch answered many questions in an instructive way.

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### SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by Alex. C. Soper Jr., secretary)—The evening of January 11 ended the annual clinic day of the Santa Barbara Cottage Hospital, with a banquet at the La Cumbre Golf and Country Club, participated in by forty-five members and guests. The morning had been devoted to exhibitions of major surgery and nose and throat work, and the afternoon to medical subjects, at the hospital, this being the fifth year of this clinic day.

Addresses were made briefly at the order of President Nuzum, by Drs. E. O. Campbell (state assemblyman), W. J. Mellinger, Rexwald Brown, H. J. Ullmann, A. C. Soper, and H. C. Bagby. An important order of business was the passing of a motion to devote \$100 from the treasury to the Gorgas Memorial Fund.

Among the visitors were Julio Bianchi of Ventura, A. F. Heimlich of Grand Junction, Colorado, and W. E. R. Schottstaedt of Fresno. The superintendent and house officers of the Cottage Hospital were also present.

Election of officers resulted in L. W. Hotchkiss being made President, H. E. Henderson, Vice-President, with O. C. Jones of Lompoc First Vice-President-at-Large, and Robert Brown of Santa Maria Second Vice-President. Doctor Soper was re-elected Secretary-Treasurer. Censor appointment was postponed to a succeeding meeting.

The delegates to the state convention serve for two years and are Ullmann and Nuzum (alternate).

Three applications for membership were read and passed to the censors.

#### The Fifth Annual Clinic Day Santa Barbara Cottage Hospital

The fifth annual clinic day given by the Santa Barbara Cottage Hospital was held on January 11, 1926.

This event has become an annual one for a number of reasons. It gives an opportunity for members of the staff to present their work to others of the staff and to visiting physicians. It allows outside physicians to put in a day of intensive clinical review. There is a great stimulus through such meetings on the part of members of the staff to put on creditable work.

The visiting man may choose from a considerable line of material and may spend his time in something in which he is particularly interested. The laboratory demonstrations seem to hold as much of general interest as any special department, including surgery, and it is the laboratory demonstrations that especially valuable points may be picked up by men doing general work.

This clinical meeting was the most successful that the Cottage Hospital has yet held, and the members of the staff feel repaid for their efforts. A group of tonsillectomies, submucous resections and a mastoid were presented by members of the ear, nose and throat staff. Laparotomies for various conditions were done by the surgical group and a varied medical program was presented by the medical staff.

The meeting was in charge of Franklin R. Nuzum as general chairman, A. G. Isaac, chairman of the surgical committee; H. E. Henderson, chairman of the medical committee, and P. C. Means, chairman of the ear, nose and throat committee.

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#### SANTA CRUZ COUNTY

The Santa Cruz County Medical Society was a guest of President Grant Hatch at its annual meeting held recently. Refreshments were served at the close of the session. Eighteen members were present.

A patient suffering with third nerve paralysis was presented by Hatch and the subject discussed by several members. P. T. Phillips and others discussed some of the usual and rarer manifestations of cerebral abscess.

Steps were taken to revise the constitution and by-laws of the society, and it was voted to incorporate in these changes that necessary business of the society as it contacts with state and national associations should be settled at a meeting in November, so as to conform with the movement to make the calendar and official years correspond in all essential particulars. Dues for 1926 were fixed at \$11.

Officers for 1926 were elected as follows: President, William Everett Musgrave (newly elected member by transfer from San Francisco County Society); First Vice-President, Alfred Liles Phillips; Second Vice-President, Ehler H. Eiskamp; Secretary-Treasurer, Dean Sanford Woodward; Editor, Harry E. Piper; Delegate to California Medical Association, Ambrose Franklin Cowden; Alternate, Jessie C. Farmer.

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#### SONOMA COUNTY

Sonoma County Medical Society (reported by Guy A. Hunt, secretary)—The Sonoma County Medical Society met in the Chamber of Commerce in Santa Rosa, Thursday, December 10. Twenty-three members were present. Officers for 1926 were elected, as follows: President, N. R. H. Juell, Santa Rosa; Vice-President, A. J. Lumsden, Petaluma; Secretary, Guy A. Hunt, Santa Rosa; Treasurer, R. M. Bonar, Santa Rosa. Censors: J. H. McLeod (three years), S. Z. Peoples (two years), and Elisabeth Emerson (one year). Delegate: S. S. Bogle, Santa Rosa, and Alternate, A. M. Thomson, Sonoma.

Charles Ianne, assistant medical director of the Arroyo Sanatorium at Livermore, read a paper on "Heliotherapy." Several cases were cited showing the injurious effects of sunlight on pulmonary tuberculosis where this therapy was used extensively. Doctor Ianne stated that it is a powerful agent and used without caution has caused relapses with rapid rise in temperature and death in

many cases. However, he recommends its use in glandular tuberculosis, where it does much good. He compared the use of sunlight to that of a patent drug if we were not familiar with, or could not measure, the dosage of the drug.

Harold Trimble of Oakland, formerly of Colfax, and medical director of Weimar Joint Sanatorium and at present attending physician of the Alameda County Infirmary, San Leandro, read a paper on "Tuberculosis in Childhood." He stated that no doctor should be expected to diagnose tuberculosis of children (i. e., glandular tuberculosis) without the use of the intradermal skin test and x-ray; that the findings by auscultation, percussion, etc., were negative in these cases. Trimble discussed the great value of the Preventorium in Alameda County in caring for and teaching undernourished children.

Mrs. Edythe Tate Thompson, secretary of the State Bureau of Tuberculosis, talked on the efforts being made to build a sanatorium and preventorium in Sonoma County.

After a resolution to endorse the movement of the Federated Women's Clubs in Sonoma County in their efforts to obtain a tuberculosis sanatorium the meeting adjourned.

#### CHANGES IN MEMBERSHIP

**New Members**—Addison Fordyce, San Francisco; Edward A. Halley, Fresno; Norris R. Jones, Sacramento; John M. Kirby, Bakersfield, Angus McKinnon, Joseph L. Mullin, Sacramento; Charles A. Short, San Jose; Arthur B. Smith, San Diego; Talbert Watson, San Jose.

**Transferred**—John F. van Paing, from Los Angeles County to Santa Barbara County.

**Deaths**—Cline, John W. Died at Santa Rosa, December, 1925, age 65. Graduate of the College of Physicians and Surgeons, Keokuk, Iowa, 1881. Licensed in California in 1884. Doctor Cline was a member of the Sonoma County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**The Ischial-Ramic Diameter**—John P. Gardiner, Toledo, Ohio (*Journal A. M. A.*), stresses the point that the ischial-ramic diameter has an important bearing on the proper conduct of labor. Near the end of the first stage of labor the presenting part is found in one of the oblique diameters, usually the right—a left occipito-anterior presentation. In this position the left parietal bone of the fetal head is in contact with the left ischial spine and the right parietal bone is in contact with the inner surface of the descending and ascending rami of the pubis and ischium. In the usual presentation, the presenting part must be forced against the left ischial spine if there is any disproportion between the presenting part and this diameter. From detailed pelvic measurements, Gardiner has found that the ischial-ramic diameter averages 9.5 cm., and the distance from the ischial spines to the subpubic ligament averages 8.5 cm., making an average difference of 1 cm. in the two measurements. Gardiner has also found by the examination of women in labor and by menstruation of the photographic cuts of sagittal sections of women who have died during the different stages of labor, that cervical dilatation takes place in the plane of the ischial spines, hence, the danger to the cervix from laceration can be readily understood. In a left occipito-anterior presentation, the danger to the cervix is greater from the left than from the right ischial spine. Gardiner is convinced that the cervical laceration is not caused by overstretching per se or by the asymmetrical position of the uterus, but by pinching of the incompletely dilated cervix between the fetal skull and the ischial spine. He depreciates allowing a woman in labor to exert every effort to augment the uterine contractions. This practice is extremely poor obstetrics, and before the cervix is dilated, is fraught with danger. Any downward traction causes the undilated cervix to come in contact with the ischial spines. Posterior and anterior and many lateral and stellate tears are due to poor instrumentation. Gardiner says that to prevent this tearing it is necessary to wait for full cervical dilatation; any interference during the first stage of labor is fraught with danger, unnecessarily predisposing it to the development of cancer.





THOMAS CLAY EDWARDS  
1860-1925

Thomas Clay Edwards was born in Columbia, Missouri, and obtained his education in the common schools of that state. He graduated from the St. Louis Medical College, Missouri, in 1883, at the age of 22, coming direct to Salinas, where he located and practiced his profession for forty-three years. As a physician he was representative of the best that is to be found in the ranks of general medicine. Well qualified by education, study and experience in his profession, he had always a clear vision of the human element in the case as well as the inestimable gift of common sense in meeting the every-day problems of family practice.

That he was eminently successful in his chosen field is best attested by the universal esteem and sincere affection in which he was held by his community.

Doctor Edwards was a strong supporter of medical organization and always an active worker in medical societies. He was a member of the Monterey County Medical Society and served as president many times. He joined the California Medical Association in 1903 and was elected a member of the council before 1904, serving continuously, except during his presidential year, until his death. He was elected president in 1923-1924, and took for his presidential address the subject of "The Doctor as He Was, Is and Should Be." This paper showed such breadth of vision and wide understanding of the medical profession of today, and its manifold relations and problems, that it received a most flattering reception. In our meetings, Doctor Edwards represented keen intelligence, a broad understanding, and a charitable interpretation. Doctor Edwards was also a Fellow of the American College of Surgeons.

As a man, Doctor Edwards' best testimonial is the affection in which he was held by so many of the profession, especially by those whose intimate contact with him

for many years, had fixed his value and his worth as trusted councilor and certain friend. His ideals were of the highest and he lived up to them, his ethical concepts were always sound and true to our best traditions. It was instinctive in him to think rightly, and in action and in his daily life this instinct had become a habit.

In the community in which he practiced he lent his moral support and active energies to all civic betterment. He upheld the standards of sanitation; he educated the public in medical topics suitable to their needs, and was an opponent of intemperance and vice. As a good physician, he walked among men as an example of what he professed. He had that sane kindness that never flagged, was magnanimous to a fault, and carried in his heart that sympathetic understanding of life that makes medicine a divine art.

In Thomas Clay Edwards we had the highest type of man serving humanity in the greatest of all professions—the doctor of medicine.

He has gone and we shall miss a wise, honest physician, a sincere and trusted friend.

**Diphtheria in Certain Large Cities of Europe in 1924**—The diphtheria death rates in the large cities of Great Britain in 1924 were on the whole very similar to those observed in the large cities of the United States for the same year. The range, however, was somewhat greater (in the United States, from 1.6 to 23.0; in Great Britain from 0.0 to 25.7). A larger proportion of the British cities had a rate of under 10 (73 per cent, as compared with 54 per cent of the cities in the United States). The Scottish cities Glasgow, Edinburgh and Dundee all report high rates; that of Aberdeen is relatively low. The average death rate from diphtheria in the Scottish cities for the preantitoxin period 1858-1895 was much higher than that of most English towns. Manchester had a death rate eight times that of Birmingham, and London had a rate almost exactly like that of New York. There is no obvious relation between the degree of industrialization of a city and its diphtheria death rate. In Germany the range for the thirty-seven cities is from 0.8 (Lubeck) to 19.5 (Mannheim). Berlin and Munich have very much lower death rates than either London or New York (Berlin, 2.9; Munich, 5.7; New York, 11.9, and London, 12.3). It might have been supposed that climatic conditions in Germany would make for a somewhat higher rate than in England, but 59 per cent of the German cities had rates of 5.0 and over, and 60 per cent of the British cities had the same rates. In the decade 1880-1890, the diphtheria mortality was considerably greater in Berlin and the German cities than in Great Britain. The cities in France make a particularly good showing in diphtheria death rates, only one having a death rate above 10, and one large city (Toulouse) reporting no deaths from this infection. Paris, where diphtheria seems to have been about the same as in London during the preantitoxin years, had a rate of only 5.4 in 1924, less than half that in New York or London but nearly double that in Berlin. Of the other European cities Geneva is the only one on the honor roll, with no deaths from diphtheria. For the most part, even in northern Europe, diphtheria death rates in 1924 were very low. It is a little surprising to find that Rome has a higher diphtheria mortality than the cities of Holland, Belgium, Norway and Sweden.

**Characteristic Changes in Blood Chemistry in Whooping Cough**—A total of 200 analyses of the blood in whooping cough have been made by Joseph C. Regan and Alexander V. Tolstouhiov, Brooklyn (Journal A. M. A.). Distinct and apparently significant changes have been encountered, the most characteristic of which were (1) a lowering of the hydrogen ion concentration of the blood and (2) a diminution of the inorganic phosphorus content.

"You spoke one day a cheering word  
And passed to other duties;  
It warmed a heart, new promise stirred,  
And painted life with beauties;  
And for the word, the thought, the prayer,  
You'll reap a palm, sometime—somewhere."

## Utah State Medical Association

T. C. GIBSON, M. D., Salt Lake City.....President  
 W. R. CALDERWOOD, M. D.....President-Elect  
 FRANK B. STEELE, M. D., Salt Lake.....Secretary

*Editorials by J. U. GIESY, Associate Editor for Utah*

### IGNORANCE—THE WET NURSE OF THE CULTS

Cultism, like a priestcraft form of religion, depends largely upon ignorance, which engenders a too facile faith. And a too facile faith is practically gullibility. History will record that the cure of ignorance is education. Consequently, in very truth, the cure of cultism lies not in professional ravings, or attempted anti-cult legislation, but within ourselves.

Any man who has worked long over the dissection table, has examined a human spine, has seen how wonderfully it is put together, how by a process of nature's own engineering it is trussed and guyed, will scarcely credit the statement that it is such a loose collection of segments that it is going to slip out of alignment every time its mundane user yields to the impulse of a good round, rousing sneeze. You and I as medical men, then, are immunized by education against the alleged slippery quality of the vertebral segments of the thing on one end of which we sit and upon the other end of which our head rests, but—what of the man in the streets?

To the average man there is a mystical something in the name of doctor, and it matters little to him whether the doctor is an M. D., or a D. C., or what. He is a good deal like a man going into a grocery store and buying a can of peas. Peas is peas, and a doctor is a doctor and supposed to know what he is talking about, and so if the "doctor" tells the poor chap that his vertebrae are wandering around like a lot of badly trained raw recruits who can't keep an alignment, he is prone to believe.

Hence, it is up to us to instruct the man in the streets to a point where, when he hears such a statement, he will recognize it even as we do, as ridiculous. And the ridiculous is a thing at which the average man will laugh.

Much has been done along the lines of education already in health clinics, in radio talks, in lectures. As proof of this it is interesting to note how many, many women now report themselves to their doctor at the first discovery of a tumor in the breast. This is but an illustration, but it can surely be carried into the general medical field. It will take some time, some work. But surely, if in the end, we shall arrive at a point where the public will understand that educated physicians are working not only for a living but for the actual scientific welfare of the race and the individual patient, then all the effort it may require will be well spent. And should such a point be arrived at, then it will be certain that most of the cults will fade away in the light of a lessened ignorance.

Because ignorance and blind faith go hand in hand together. The savage believes in his witch doctor. The ignorant peasant accepts the gospel of

his priest. The ignorant layman takes what the doctor tells him as truth. The child blindly trusts its parent—but with age and education the child begins to ask "why." And so it seems to us that the best weapon to turn against cultism, whose wet nurse is the still enduring ignorance of the masses as applying to true medical science, is to constitute each man himself an apostle and consistently and continually instruct each of his patients to a point where intelligent co-operation shall replace that ignorance. Along such a program the movement for the examination of the apparently well is a step, and a big one, in the right direction. Every convert to such a check-up on his physical condition becomes a potential factor in a wider education of the masses in what the profession today is really seeking to attain. It is a big job, but let us each one get at it. Many hands can make, and long before this have made, light work of jobs as big as this. And to make a false claim appear in the ridiculousness of all its falsity is about the strongest argument against it one can use. This reminds us of a rather gruesome little story told us by a local doctor who was called to a house where a man lay dead, and a member of a certain cult was trying to "adjust" the spine of the corpse! We understand that the family of the deceased no longer have so facile a faith in that particular cult. Our doctor friend did not say whether he found anything wrong with the patient's spine, but he seemed to feel that something had "slipped" even if only the patient himself across the River Styx.

Here, then, is a practical work of both self and racial advantage for every doctor in Utah, or the United States, or the world. Let's go! Ignorance cannot resist a consistently laid down barrage of demonstrable facts.

### PLEASE!

Once more as in the past, the editor, now that elections in the component societies of the State Association are over and new secretaries are elected and installed, wishes to appeal to these several gentlemen to cooperate with him in the task of giving the state news a general reporting through the Utah section of CALIFORNIA AND WESTERN MEDICINE.

Once more he wishes to ask them in the most interested spirit to send to his address—Felt building, Salt Lake City—brief reports of their society meetings, and any other items of interest affecting medical activities, either public or personal, in their sections of the state. If they will do this, we can have the best section we have ever had, and we can tell each other what we are doing in our own districts—we can keep in touch.

May we not hope that some or all of the newly elected officers will accept this invitation to cooperate?

**Utah Notes** (reported by J. U. Giesy, associate editor)  
 —Claude Shields, chairman of the scientific committee of the Utah Association for the next annual meeting, has begun work looking to the obtaining of a creditable program. Frank Bartlett of Ogden will visit California with the object of conferring with speakers there and if pos-



sible arranging to gain their attendance at the state meeting. Until it is determined just what arrangements can be made, the council has decided to set no definite date for the meeting, but to be governed largely by the convenience of obtaining the best list of speakers at the most convenient time, based upon their other engagements.

Health talks over the radio as a means of putting the general public in touch with modern medical advances and thereby educating them in the aims and endeavors of the profession, are proving more and more popular as time goes on. The program as planned will be continued.

The excavation for the new Medical Arts building has been completed and work is to be started as soon as contracts are let, which we understand will be about the first of February. The building will be ten stories in height and constructed to fill the needs of the medical and dental professions in every sense. There will be an auditorium open to all professional societies and a reference library. As an indication that this building will fill a long felt want, every foot of floor space is already engaged by local medics and dentists.

During December the Weber County Society held its annual banquet and election, to which officers of the State Association were bidden as honorary guests. President Gibson of the State Association, F. Steele, secretary; Calderwood and Lecompte attended. T. B. Beatty, secretary of the State Board of Health, was also present. E. M. Conroy was toastmaster and the Rev. J. W. Hyslop was the orator of the evening. Short talks were made by Gibson, Calderwood, and Beatty. The banquet was a very enjoyable affair. The election of officers resulted in the choice of E. R. Dunke, President; W. R. Brown, Vice-President; H. C. Strangquist, Secretary-Treasurer; F. K. Bartlett, E. C. Rich, E. B. Mills, W. J. Wright, W. A. Whitlock, and E. M. Conroy, Delegates, and G. C. Moyes, H. W. Nelson, E. Z. Tanner, and L. S. Merrill, Alternates.

Elections recently held in the various county societies outside of Ogden and Salt Lake give the following selections of officers for the several societies for the ensuing year:

Box Elder County—President, R. A. Pearse; Vice-President, E. A. White; Secretary-Treasurer, A. D. Cooley. Delegate: O. D. Kuke. Board of Censors: E. A. White, E. A. Weymuller, L. D. Manhannah.

Cache County—President, P. W. Elisson; Vice-President, W. B. Preston; Secretary-Treasurer, E. Worley. Delegates not yet announced.

Utah County—President, Fred R. Taylor; Vice-President, V. P. Richards; Secretary-Treasurer, Arnold Robinson. Delegates: E. S. Hughes, R. S. Clark, O. Grua, P. M. Kelly. Alternates: J. W. Aird, L. D. Stewart. Board of Censors: L. W. Oakes, B. C. Linebaugh, J. W. Hagen.

President Gibson announces the appointment of the following committees of the State Association:

Scientific Committee—Chairman, Claude Shields; F. K. Bartlett of Ogden, W. L. Rich; Steele, secretary.

Public Policy and Legislation—Chairman, John Z. Brown; Fred Taylor of Provo, E. F. Root, Gibson and Steele.

Public Health and Instruction—W. C. Christophersen, E. M. Neher, R. A. Pearse of Box Elder, H. J. Eidel, S. G. Paul.

Officers' Reserve Corps—C. S. Baldwin, chairman; H. P. Kirtley, Roy Wilson.

Conference Committee for Industrial Commission—R. S. Pendleton, chairman; J. Hosmer of Murray, L. N. Ossinan.

S. H. Besley has been appointed prison physician. The board of corrections confirmed the appointment of S. H. Besley as state prison physician at a meeting held Thursday afternoon at the state capitol. All the members of the board, except James Ivers, who was absent, voted "aye." Dr. Besley assumed his new duties Friday, succeeding George H. Allen, who resigned a month ago, effective January 1. Doctor Besley is a native of Salt Lake. He was educated in the Salt Lake schools and is a graduate of the University of Utah and of the Northwestern University School of Medicine. He served his

internship in Chicago. Later he became connected with the Holy Cross Hospital. Dr. Besley was recommended for the new position by W. W. Barton, Democratic county chairman.

Willard Christophersen has been continued in his position of city health commissioner of Salt Lake, together with the present personnel of the city's health staff. We feel that it is a move in the right direction to fill such offices as those upon which the public welfare or health may depend with men of proven worth as a sole consideration, rather than to make any such appointment depend upon political preference.

Beginning the second Wednesday in January, Major S. C. Gurney of the 104th Division Reserve, will hold bi-monthly meetings for the instruction of Medical Reserve Officers, in an advanced course of instruction, which is, in reality, a new first course designed to put the medical army reservists in close touch with the duties and functions of their positions as medical officers of the army. Meetings will be held in the quarters of the U. S. Veterans' Bureau, beginning at 7 o'clock. Men taking these lectures will be given credits in the same degree as those taking the parallel course in writing. As a fellow reserve officer, we would urge all reserve medical officers to attend these meetings and gain the full benefit of Major Gurney's talks.

Election of the Holy Cross Hospital Clinical Association resulted in the choice of Fred Petersen, chairman; R. C. Pendleton, secretary-treasurer.

The Wasatch Academy resumed sessions January 7, after the holiday recess. Meetings will be held each Thursday night from now until the end of April.

In accord with the instructions adopted at the last annual session of the State Association, the Committee on Public Policy and Legislation, John Z. Brown, chairman, interviewed the senior Senator from Utah, Reed Smoot, during his last visit to the city, in regard to a reduction of the Harrison Act annual fee of \$3 applying to physicians and dentists, also as to the possibility of gaining an income tax reduction for physicians as applying to expenses occurred in attending medical conventions and post-graduate work.

Senator Smoot favored the return of the narcotic tax to the original \$1 which existed prior to the war increase, but was very dubious about the possibility of obtaining any leeway as applying to educational expense and income taxation. He thought it possible that some such exemption might be given to physicians of limited income—say up to \$2500 per year. He promised to confer with Secretary Mellon upon his return to Washington, with a view of obtaining any action which might be gained. That he has kept his promise is evidenced by the following letter just received by Doctor Brown:

January 12, 1926.

Dear Dr. Brown:

I am in receipt of your note of January 6, 1926, in which you enclose copies of letters, one to Dr. William C. Woodward, Chicago, Ill., a letter from Dr. Earl C. Sage to Dr. S. G. Kahn, and a letter to Dr. Earl C. Sage, Omaha, Neb., signed by yourself.

Answering your note will state that the Senate Finance Committee today approved of the reduction of the narcotic tax from \$3 to \$1, but no final action was taken upon permitting physicians to deduct from their income tax reports the expense they have to meet in attending medical conventions and undertaking post-graduate work.

I brought up the question of allowing the deduction to physicians, whose income does not exceed \$2500 per year. A number of the committee desired time to think over the proposition, and so the question of allowing the exemption held over for tomorrow or the next day.

With very best wishes, I remain,

Yours truly,

(Signed) REED SMOOT.

Salt Lake County Medical Society, December 14, 1925 (reported by M. M. Critchlow, secretary)—The annual meeting of the Salt Lake County Medical Society

was held this date with President John Z. Brown. Seventy-five members and two visitors were present.

A resolution passed by the Chicago Medical Society was read. F. E. Steele moved that the resolution with certain substitutions be adopted by the Salt Lake County Medical Society, the resolution to read as follows:

"Whereas, The American Public Health Association at its annual meeting in St. Louis, in October, 1923, listened to an address by one of its members, favoring a new doctor in each community where a health officer is needed, to be known as a Doctor of Public Health, and

"Whereas, Several institutions of learning have introduced courses in public health, whereby a layman as well as a physician, may be instructed and in a comparatively short time qualify as a Doctor of Public Health, (D.P.H.) and be allowed to advise, qualify and practice preventive medicine, and

"Whereas, In all probability a bill to license a so-called D.P.H., will be introduced into the next session of the State Legislature of Utah, and

"Whereas, the Salt Lake County Medical Society believes that all health officials should first be physicians (M.D.), who have the proper knowledge of the science concerned in public health, and that such knowledge cannot be gained by any layman in two or three years, and

"Whereas, Such an arrangement of a layman being a health official, places a double expense on the community, since it is necessary for the community to then procure the service of an M.D., in addition to a layman, and

"Whereas, The state confers on an M.D. the right to practice medicine and surgery in all its branches, while the special licensing of a D.P.H. would be special legislation tending to take from an M.D. that right.

"Therefore Be It Resolved, That the Salt Lake County Medical Society believes all positions of trust pertaining to public health in any community should be held by physicians (M.D.), and not by laymen holding D.P.H. licenses, and

"Be It Further Resolved, That the Salt Lake County Medical Society views with displeasure any move on the part of the American Public Health Association, which may express a desire to replace physicians as health officials by laymen with D.P.H. licenses." Seconded and carried.

This resolution discussed and commended by Fred Stauffer. He moved that the Committee on Public Health and Legislation be requested to investigate such organizations in this county and report to the society at an early date. Seconded and carried.

President John Z. Brown addressed the society on the activities of our organization for the past year. He urged co-operation for our own protection and explained certain apparent hostilities of the laity to our profession. His masterly talk was highly applauded.

The following officers were elected for 1926: President, F. H. Raley; Vice-President, W. G. Schulte; Secretary, M. M. Critchlow; Treasurer, Joseph E. Jack. Member of the Board of Censors: John Z. Brown.

**Meeting January 11, 1926**—Ralph Tandowsky read a paper on "Serologic Studies of Proteinurias," based on experimental work, from which the following conclusions were reached:

"(1) Horse globulin is definitely eliminated by the kidney of human and dog; (2) Intravenous injection apparently results in a more rapid elimination of protein by way of the kidney than other parenteral routes studied by other writers; (3) When administering large doses of serum in disease by the intravenous route, there is no question but that some of the serum proteins are filtered through the kidney; (4) The present study indicated the use of highly concentrated serums in the treatment of disease."

W. G. Schulte, in discussing "Pyelography and Its Complications," reported history, physical and laboratory, and autopsy findings of a case of carcinoma of the pancreas with metastases in the liver and a diffuse nephritis in the left kidney. The patient developed a uremia following bilateral pyelography from which he recovered, succumbing later to the carcinoma.

J. Albert Peterson and Grover R. Bradley were elected to membership.

## Nevada State Medical Association

A. J. HOOD, M. D., Elko.....President  
HORACE J. BROWN, M. D., Reno.....  
.....Secretary and Associate Editor for Nevada

**Washoe County Medical Society** (reported by John A. Fuller, secretary)—The Washoe County Medical Society held a meeting on January 7, 1926, in the auditorium of the Y. M. C. A. building, President Henry Albert presiding.

Doctor Albert, the new president, appointed the following committees for 1926: Public Health—C. E. Piersall, chairman; A. R. DaCosta, M. A. Robison. State hospital visiting staff—Medicine—C. W. West, S. K. Morrison, John Tees. Surgery—A. Parker Lewis, Vinton Muller, Donald MacLean. Eye, ear, nose, throat—D. L. Shaw, J. LaRue Robinson, J. A. Fuller. Anaesthetics—M. A. Robison, W. L. Samuels. Radiology—C. E. Piersall, W. H. Kingsbury. Genito-Urinary—B. H. Caples.

Earl C. Crevaling's application for membership was read, and referred to censors.

Doctor Albert briefly discussed the advisability of holding meetings at the homes of members of the society, and announced that the next meeting would be held at the home of C. E. Piersall.

Thomas W. Bath reported a case and demonstrated the specimen of hematoma of the ovary. Etiology, pathology and symptoms of this unusual condition were discussed by the author, Dalby and Albert. Bath also presented a hydatidiform mole for discussion.

Richard A. Bolt, (Berkeley, California), had for his subject the prevention of simple goitre. He traced the prevalence of this disease as far back as 2000 years ago, in China and India, and gave a brief resume of present endemic centers. The assertion was made that the region east of the Sierra Nevada range was becoming known as an endemic goitre center. The author emphasized the possible harm from too much iodine as a preventive, and the danger of self dosage by the laity. The importance of careful examination of school children and the accurate classification of the types of goitre found by competent physicians was stressed.

In the ensuing discussion, Morrison suggested the danger of iodine treatment after adolescence. J. L. Robinson suggested the importance of cleaning up the noses and throats of goitre patients, and Muller said this was particularly advisable in toxic cases. Walker reported but few cases found among school children in grades below the junior high school, and suggested that more could be accomplished in educating the public, by taking the matter up as a community problem rather than in the school. Upon motion of Bath a vote of thanks was tendered Dr. Bolt for his splendid paper.

Morrison moved that the committee appointed some time ago to investigate local conditions with regard to goitre and formulate a plan of propaganda, report at next meeting. Carried.

**Attendance—Members:** Morrison, Muller, Riley, Ser-voss, Lehnners, Blake, Brown, Da Costa, Tees, Piersall, Bath, Walker, Robinson, Dalby, W. H. Hood, Pickard, Caples, Albert, and Fuller.

**Visitors:** Richard Bolt, Berkeley, California; Dr. Crevaling, Miss Stillwell of the University Extension Bureau.

**The Interconvertibility of "Rough" and "Smooth" Bacterial Types**—Edwin O. Jordan, Chicago (Journal A. M. A.), asserts that single-cell strains of paratyphoid bacilli of the R and S type can more or less regularly be made to yield cells of the opposite type by appropriate treatment. A non-virulent strain can at will be converted into a virulent, and the virulent strain so produced possesses certain correlated characters, such as agglutinability and colony type formation, which distinguish it from the parent cell.



## NEWS ITEMS FROM THE CALIFORNIA BOARD OF MEDICAL EXAMINERS

C. B. PINKHAM, M. D., *Secretary*

The San Francisco Bulletin, under date of December 14, 1925, mentions the Board of Medical Examiners in a list of fifteen state commissions showing a profit during the last fiscal year.

Davis Grisso, M. D., whose license was revoked by the Board of Medical Examiners, October 18, 1923, which revocation was upheld by the decision of the Appellate Court on December 21, 1925, petitioned the District Court of Appeal for a rehearing.

In granting an injunction sought by Percy Purviance, president of the Berkeley College of Chiropractic, a decision rendered by Superior Judge Murasky, December 31, 1925, relates that the State Board of Chiropractic Examiners lack authority under their initiative act to investigate schools and colleges purporting to give a course of instruction required under the Chiropractic Act. (An unfortunate condition.)

The ouster proceedings brought against the State Board of Chiropractic Examiners by Percy Purviance, head of the Berkeley College of Chiropractic, were thrown out of court in Sacramento by Superior Judge Malcolm C. Glenn, who ruled that Purviance had no authority as a private individual to file charges against state officers, according to the Woodland Democrat of December 11, 1925.

Allen Mills, chirothesian, Richfield, Tehama County, whose conviction of violation of the Medical Practice Act was recently sustained by the Appellate Court, decided to drop the fight and has paid a fine of \$200, imposed following his original conviction.

The hearing of *habeas corpus* writ for Dr. J. S. Leibman, applicant for reciprocity license, reported arrested in Los Angeles on the strength of a telegram from Atlanta, Georgia, stating that he had been indicted there, was postponed until a later date, according to the Los Angeles Times of December 15, 1925.

The City of Riverside proposes to pass an ordinance requiring a quarterly license fee of \$3 to be paid by those licensed to practice as physicians and surgeons, osteopaths, dentists, chiropodists, attorneys, etc.

The Los Angeles Examiner of December 29, 1925, relates that the federal prohibition director proposes to wage a wholesale campaign against violation of the Volstead Act on the part of physicians and surgeons, as well as druggists.

According to the Ventura Star of November 25, 1925, the medical kit and doctors' bag belonging to Dr. Blaisdell of Santa Paula, reported stolen from the veranda at the home of Dr. Allen Peek, was found the following morning under the porch of another Ventura home, the thief having stripped the bag of hypodermic needles and narcotics.

The Fresno Bee of December 14, 1925, relates that John E. Beck, M.D., Charles E. Brown, M.D., and C. R. D. Rinkler, M.D., appeared before United States Judge Edward J. Henning in Fresno, in answer to charges alleging violation of the Harrison Narcotic Act.

"While Charles A. Baxter, one of San Francisco's old-time medicine men, was facing the police court today on a charge of practicing medicine without a license, his two assistants, Arthur B. Nelson and T. J. O'Hara, naturopath, of 1028 Market street, were served with a summons to appear before the State Medical Board. . . . Baxter formerly operated the Globe Dispensary. . . . He was fined \$400 in the federal court on May 13, 1915, for using the mails to defraud." (San Francisco, December 14, 1925.)

"Dr." H. G. Russell, recently arrested at Buena Park on a charge of violation of the Medical Practice Act, was reported to have sent a telegram to the judge stating, among other things, "I wish you would have the case dropped, if possible, as it causes me much worry. . . ." According to the Santa Ana Register of November 28, 1925, he plead guilty and on December 18, 1925, a fine of \$200 was imposed.

According to the San Francisco Examiner of December 31, 1925, the arrest of United States Health Commissioner at Kodiak, Alaska, was announced in a cable from the U. S. marshal at Valdez, and it was related that the commissioner serving "under the name of R. E. McKibben is declared by officers in reality to be none other than Dr. E. M. Webb, notorious criminal, who has served twenty-three years in prisons throughout the country, despite his education and refinement." It is alleged that Webb, while imprisoned at McNeil Island, became acquainted with Dr. R. E. McKibben, Canadian physician, "who was serving a term for being involved in a narcotic transaction," and that as a result of this acquaintance, Webb ascertained McKibben's financial resources, stole Dr. McKibben's receipts, and learned to copy his signature; that on Webb's release he decided to become known as Dr. McKibben and is alleged to have forged checks on the Canadian bank where the real Dr. McKibben had an account. These checks were cashed by a Seattle physician and occasioned Webb's arrest on a charge of forgery. The records of the Board of Medical Examiners show Rupert E. McKibben, 522 Seaboard building, Seattle, a graduate of the University of Toronto, Canada, 1897, was issued certificate No. 5457 on registration of diploma in 1900. A thorough investigation is being made.

G. F. Smith, referred to as a Crete Indian, and alleging himself to be a doctor, recently plead guilty in Los Angeles to a charge of violation of the Medical Practice Act. He claimed to have practiced twenty years in Texas, but information received from the Texas Board relates no such individual is licensed in that state. Our investigator reported G. F. Smith showed him a diploma from the Metropolitan Medical College, dated July, 1900, one of the institutions mentioned in the American Medical Journal of December 16, 1911, page 2014, as "a notorious diploma mill that was put out of business by the government."

The preliminary hearing of Paul Sandfort, referred to in the news items of the January issue, was put over from November 27, 1925, to December 16, 1925, on account of a health certificate from his physician, Emil Hund, M.D., stating that Sandfort was ill, suffering from arterio-sclerosis. On January 6, 1926, Sandfort was reported held to answer for trial in the Superior Court of Alameda County and released on cash bail of \$1000.

A report from our Special Agent Henderson relates the arrest of George D. Johnson, Stockton, California, on January 4, 1926, charged with a violation of section 274 of the Penal Code (criminal abortion) and with violation of section 17 of the Medical Practice Act. Prior reports show that G. D. Johnson plead guilty in Stockton, December 3, 1923, to a charge of violation of the Medical Practice Act, since which time complaints have come to us of alleged violations on the part of "Dr." Johnson, who is reported to be a druggist.

According to reports, W. Roy Graham, claiming chiropody credentials, recently paid a fine of \$100 in Los Angeles County on a charge of violation of the Medical Act, our investigator relating that "Graham cheerfully admitted . . . that his serum treatment was 'the bunk.'"

Edwin F. Ott, holder of a drugless sanipractic license from the State of Washington, and an alleged graduate from the American University, College of Chiropractic (Chicago), 1918, the certificate of which refers to "Reverend Edwin Forest Ott," was recently arrested in Riverside on a charge of violation of the Medical Practice Act. Our investigator reports his sign read: "Dr. E. F.

Ott, Drugless Physician," and that at the time of Ott's arrest there were found in his possession "so many different packages of herbs, powders, pills, tablets, liquid medicines, etc., that we took only a small part of them into court. . . . His record book shows that some of his patients had 'indigestin.'"

Special Agent Henderson reports Walter N. Thompson (whose name is not listed as licensed in the United States), complained of as practicing medicine at a hotel on Eddy street, San Francisco, without the formality of obtaining a license, and who could not recall the name of the medical college from which he claims to have graduated, plead guilty December 19, 1925, and on January 9, 1926, was granted two years' probation by Judge Pat Parker in Department 12, San Francisco Superior Court.

Recent press dispatches relate that "Bishop" Helmuth P. Holler, head of the Oriental University, alleged to have issued diplomas in wholesale quantities, was recently found guilty in Washington, D. C., of conspiracy to misuse the mails. It is related that a catalog of the Oriental University is said to show about 700 various degrees were issued; that a medical degree is said to have cost \$100 and could be obtained in six, and sometimes, in three months; a dental degree cost \$75, and a doctor of divinity, \$55; that the faculty met once a month to sign diplomas, and that each member received 25 cents per signature.

A press dispatch dated Washington, D. C., January 9, 1926, relates that "Bishop Helmuth P. Holler, convicted of operating a fake diploma mill in connection with the Oriental University here, today was sentenced to two years in the penitentiary and fined \$1000." Dr. Robert Adcox and Sam Kaplan, both of whom were prominently mentioned in the national diploma mill expose, defendants with Holler, were each reported as sentenced to forty days in jail.

The St. Louis Star of December 21, 1925, relates that Waldo Briggs, dean and owner of the St. Louis College of Physicians and Surgeons, the charter of which the state is now seeking to cancel, lost in the Circuit Court his fight to retain his license to practice medicine in Missouri. Following the diploma mill activities in which the name of Dr. Briggs and his college were prominently mentioned, the Missouri board, after a hearing, revoked Waldo Briggs' license.

According to press dispatches, an indictment charging Dr. Ray Beaman Horton of Purdy, Missouri, with third degree forgery in connection with the medical diploma mill scandals of Missouri, was quashed December 12, 1925, based upon the defendant's contention "that the indictment did not set forth an offense against the Missouri law." Horton is reported to have been specifically charged with forging the name of a fictitious person to what purported to be a statement of graduation acquired at the Independence (Missouri) High School by Bess Walker Sharp, an applicant for a medical license in the State of Missouri. The judge is reported to have said that the "action Dr. Horton was charged with was morally reprehensible and should be made punishable by law." The recommendation was also made that the matter be referred to the State Board of Health to determine whether Dr. Horton's license should be revoked.

G. M. Closson, reported recently to have plead guilty to a charge of violation of the Medical Practice Act in Los Angeles and to have paid a fine of \$200, developed a new idea in aesculapian finance. He is reported to have solicited life insurance and after his prospect had been examined by the company physician, Closson is alleged to have informed his prospect that he was suffering from some constitutional complaint which Closson could cure for a specified sum. He thereafter supplied his prospect with medicines. One individual complained he had paid Closson \$29 for two bottles of medicine and during the course of treatment paid Closson a total of \$150.

## READERS' FORUM

Selected short letters and abstracts from longer communications from readers are published when they remain within the bounds of decorum and law and contribute anything of value. Hereafter the name and address of the writer will be given. A pen name will be published on the author's request, and letters to the editor not intended for publication should be marked "personal."

San Francisco, January 15, 1926.

TO THE EDITOR:

We are enclosing herewith copy of our letter of January 13, addressed to the Fresno Republican, answering the criticism of the Board of Medical Examiners made by Dale Frane, secretary of the Orange Cove Chamber of Commerce, and we are wondering whether you consider this matter important enough to publish in the Journal.

C. B. PINKHAM, M. D.,  
Secretary-Treasurer, California Board of  
Medical Examiners.

Sacramento, January 13, 1926.

GENTLEMEN:

The Fresno Republican of January 11, 1926, printed a news story wherein it was related that Dale Frane, secretary of the Orange Cove Chamber of Commerce, had scolded the Board of Medical Examiners in a speech he made at the annual meeting of the San Joaquin Valley Commercial Secretaries recently held in Fresno. His unwarranted criticism calls for our reply, and we feel sure that you will give this the same prominence as the news article above referred to, headed "Orange Cove Needs Doctor."

We are charitable enough to assume that Mr. Frane, over-zealous in his enthusiasm as secretary of the Orange Cove Chamber of Commerce and without investigation, made the charges that the Board of Medical Examiners discriminated "in their examinations, of applicants . . . from other states and in favor of California graduates from . . . medical colleges," without knowledge that there is no possibility of any examiner knowing the identity of the individual whose paper he is correcting.

Mr. Frane opines that the only chance for Orange Cove "is to attract a doctor already established in the east or middle west but who, because of the desire to come to California, may be content to locate in a small town and grow up with it."

He is evidently unaware that during the past twelve years the California Board has recognized the credentials of over 3860 doctors from the various states in the Union and has granted each of them a license to practice in this state without requiring of them a written examination; yet Orange Cove has been neglected, and the Board of Medical Examiners is censured for this neglect.

Mr. Frane must also be unaware that during the past eleven years over 2000 physicians and surgeons have been admitted to practice in this state after having passed what he terms "examinations so tricky and severe that few of them are able to pass."

Over 5860 doctors have been licensed in California during the past twelve years, and yet Orange Cove is without a doctor.

Some months ago the writer received an appeal from the Orange Cove Chamber of Commerce, urging that we send a doctor to that community, Mr. Frane therein stating that the location is good but exacting that the man be "a good conscientious physician, but who must be a good, up-to-date man and one with a good personality." We have personally referred many applicants to this prospective location, yet but one has elected to "locate in a small town and grow up with it."

Of this pioneer, a recent correspondent relates:

"There was a doctor at Orange Cove about a year ago, and there were not enough people there to support him. He had to move away. . . . The people are well taken care of by the doctors at Dinuba, Reedley, Oris and Cutler. . . ."

Doctors, like other human beings, must earn the wherewithal to live for we know of no charitable organization that will support the doctor who is content to "locate in



a small town and grow up with it," and whose remuneration is not sufficient to pay his living expenses.

Statistics show that the automobile, combined with good roads, are responsible for the rural doctor seeking the larger centers of population, easy of access to suburbanites, practically all of whom now own automobiles.

BOARD OF MEDICAL EXAMINERS OF THE  
STATE OF CALIFORNIA,

CHARLES B. PINKHAM, Secretary.

January 15, 1926.

TO THE EDITOR:

For several years past complaints have come to us regarding individuals traveling in pairs who pose as specialists on the eye and through some "hokum" succeed in defrauding individuals of large sums of money, following alleged operations on the eye.

We are enclosing herewith a report of our special agent, dated San Francisco, January 14, relating to two individuals recently apprehended in Fresno County and we believe that this report would furnish interesting reading in CALIFORNIA AND WESTERN MEDICINE.

C. B. PINKHAM, M. D.,  
Secretary Board of Medical Examiners.

With non-essentials eliminated, Mr. Henderson's interesting report says:

DEAR DOCTOR:

On January 7 the above individuals were arrested in Fresno County, were jointly charged with obtaining money by false pretenses, and for violating the Medical Practice Act.

On January 13 both defendants waived a preliminary hearing before Justice of the Peace Holderman in the city of Reedley and were thereafter held to answer to the Superior Court of Fresno County, being remanded into custody for failure to produce bail in the sum of \$5000 cash each.

The arrests grew out of the complaint of Mrs. Emily Howard, who resides near Reedley, who had on January 7 paid the two defendants the sum of \$500 for an alleged "eye operation."

Briefly, the facts of the complete transaction, as related by Mrs. Howard, are that during the month of August, 1925, two individuals called at her home, representing that one of them was an optician and that the other was a physician and that both of them represented the St. Francis Institute at Denver, and after some conversation with her, discovered that she had an affliction of the eyes and after the administration of a remedy to her eyes, which they claimed to contain radium, removed three "films" from each eye, Mrs. Howard describing these "films" as having the appearance of a very thin transparent piece of rubber, \$600 being charged and paid for this "operation."

During the month of November, 1925, two different individuals called upon Mrs. Howard, saying that the purpose of their visit was to determine whether or not the operation performed during the month of August had been successful, saying that the doctor in the last instance was one of the staff of the institute above mentioned, and again, after a very ostentatious examination of Mrs. Howard's eyes, a second operation was performed, at which time two films were taken from each eye and the sum of \$600 paid for this operation.

When the above defendants called upon Mrs. Howard on January 7, they told her practically the same story as did the second pair, namely, that Faircloth was the optician and that Gebhart was a member of the staff of the St. Francis Institute in Denver and that they had been requested by the institute to call upon Mrs. Howard to determine whether or not the two previous operations had been a success and, after the examination made by Gebhart, he informed Mrs. Howard that he regretted to tell her that it had not been successful and that a third operation would be necessary. The operation was thereupon performed and one "film," answering the description of the previous "films," was taken from her left eye, for which the sum of \$500 was paid.

Mrs. Howard is very positive in her statement that six

separate and distinct individuals called upon her, covering the whole transaction. The second two, namely, those who called upon her during the month of November, resemble the descriptions given us by Mrs. Frank Lilyard, Box 3, Oakdale, California, under date of May 28, 1924, in which Mrs. Lilyard relates that both men were of dark complexion, the taller of the two, who was the "doctor," being about forty to forty-five years of age, and the other, the "optician," Mrs. Lilyard states, being considerably younger. In the communication above referred to, Mrs. Lilyard mailed to us the following receipt, dated February 20, 1922:

"Received from Mrs. Lilyard, \$35 in full. L. Edwards."

According to Mrs. Lilyard's communication, the L. Edwards, above referred to, was the "doctor."

These two men are quite likely the individuals referred to in our files as "Pierce" and "Williams," who operated in this community about the same date as referred to by Mrs. Lilyard.

On November 22, 1923, two individuals answering the descriptions furnished us by Mrs. Lilyard, called upon Mrs. Orilla B. Smith in the vicinity of Easton, Fresno County, stating that they represented the St. Francis Institute, Denver, Colorado, and representing themselves as J. Cooper, who was the optician, and Dr. J. B. Peters, who was the physician, and after an alleged operation, removed a "film" from the eye of Mrs. Smith after the use of what they called radium, and for which they charged her the sum of \$487.50. Mrs. Smith made out a check for this amount, payable to Cooper, who took the check in to Fresno for payment, Dr. Peters remaining with Mrs. Smith during Cooper's absence, which was apparently for the purpose of preventing her from giving the matter too serious thought during the absence of Cooper. Cooper returned in a short while with the information that she did not have sufficient funds on deposit in the Bank of Italy, upon which the check was drawn, to cover the amount named, i. e., \$487.50, whereupon Mrs. Smith destroyed the first check, determined the amount of her bank balance, and drew them a check accordingly in the sum of \$300, which was shortly afterwards presented to the bank and paid to Cooper. Attached hereto is a receipt signed "Dr. J. B. Peters," as well as the cancelled check above referred to, bearing endorsement of "J. Cooper."

Official photographs and descriptions of Gebhart and Faircloth have already been forwarded, through the State Identification Bureau, to the sheriffs of the various counties in which these individuals are known to have operated and I have arranged through the Identification Bureau at Fresno to mail to us one dozen photographs of each, showing the official description. It is my purpose to mail to each individual throughout the state, as disclosed by our files to have had dealings with "eye specialists," a photograph and description of Gebhart and Faircloth, with the hope of identifying them as the same individuals who may have worked the same scheme with the persons to whom we send these photographs, as was worked upon Mrs. Howard.

I have had complete statements taken from Mrs. Howard and from Mrs. Orilla B. Smith of Easton, which will be transcribed in the near future, and then made a part of our files.

From the foregoing it is obvious that this scheme is operated by a group of at least six individuals.

H. G. HENDERSON,  
Special Agent.

A thin diet is the healthiest for the body. But we ought chiefly to avoid all excess in meat or drink or pleasure when there is any feast or entertainment at hand, or when we expect any royal or princely banquet, or solemnity which we cannot possibly avoid; then ought the body to be light and in readiness to receive the winds and waves it is to meet with.—One of Plutarch's Rules of Health.

Charles Darwin, according to the Dearborn Independent, once took from the foot of a wandering bird a small fragment of earth which, when moistened, and planted, produced no less than eighty plants.

## INTRAVENOUS USE OF DYES

Some of the fundamental conceptions in the field of chemotherapy as it applies to the intravenous use of dyes are discussed by John W. Churchman, New York (Journal A. M. A., Dec. 12, 1925), to see whether apparent contradictions between experimental and clinical results may be harmonized and to determine to what extent the reigning hypotheses in the chemotherapeutic field are justified by fact. First of all, there is septicemia, a word which, while purporting to describe a definite disease, really includes a large number of different diseases, as unrelated in clinical picture, in pathologic basis and in gravity of prognosis as measles and typhoid fever. A septicemia caused by staphylococcus aureus is one thing, a septicemia caused by streptococcus hemolyticus is quite another, and a septicemia in which bacillus anthracis is isolated from the blood is another, and very different still. That a staphylococcus aureus septicemia, arising from a lesion susceptible to adequate surgical treatment, has subsided after intravenous injection of gentian violet is no reason whatever for expecting a septicemia caused by streptococcus hemolyticus which has reached the blood stream from an acute endocarditis to subside. Failure to take into account the variation in the seriousness of different types of septicemia may account in part for the conflicting evidence as to the value of the dyes in the treatment of this condition. Nevertheless, the coincidence, if coincidence it be, in certain of the cases treated with anilin dyes has been too striking to dismiss without careful scrutiny. No chemotherapeutic substance, however effective, may be expected to save cases in which the focal infection is inaccessible, in which complications (themselves likely to prove fatal) have already developed, in which the vital forces have been drained by the intoxication beyond the point of recovery, and in which strains of peculiarly resistant bacteria are present. It might be supposed that the difficulties of reaching a sound conclusion in this question could be readily overcome by experimental study, but workers in this field are sorely handicapped by the fact that the very procedures they would employ to find out the truth have proved none too reliable. That the results of experiments made in glass on the phenomena of bacteriostasis cannot always satisfactorily be transferred to the animal body is well enough known. As a rule, chemical agents are less effective against organisms in the living body than against the same organisms in the test tube. It is also an unfortunate fact, and one which is not widely appreciated, that a true bacterial septicemia, corresponding accurately to the disease in man, is difficult to produce in laboratory animals. The facts, therefore, are not easy to obtain by experiments. This is one of the reasons, among many, why the chemotherapy of bacterial disease lags so far behind the chemotherapy of parasitic diseases. This lack of a trustworthy instrument of observation has so discouraged certain workers in this field as to make them abandon the quest and trust the future to empiricism. The discrepancy between the successes (granting for the moment that they are not accidental) and the failures may, in part, be harmonized by bearing in mind that no two cases of septicemia are exactly alike and that, therefore, uniform results are not to be expected. It is possible to harmonize also the apparent discrepancy between the absence of theoretical evidence for expecting the intravenous use of dyes to be of avail in the treatment of septicemia and the moderate degree of clinical success which seems to have been obtained. The fact that septicemic patients often recover spontaneously indicates that the struggle between the host and the invader is usually a close one. In many cases, doubtless, very little aid might be needed to turn the tide of battle in favor of the patient. Such aid might be provided by a partial sterilization or even by the production of conditions in the body which make it difficult for organisms to grow, though none of them had been killed. Certain it is that the present time a sterilisans magna, in the original Ehrlich sense, is very difficult if not impossible to produce. Would it be advisable to produce it if such a thing were possible? It is by no means certain that it would, at least in every case. If the blood and tissues were invaded by an organism capable of producing an endotoxin, sudden wholesale death of the bacteria followed by lysis and absorption of the freed endo-

toxin might well produce serious results. Results of this kind do actually follow the injection of large numbers of the non-virulent bacillus prodigiosus, which promptly undergo lysis with the liberation of toxic products and the production of severe symptoms. Results of a like nature have also been actually reported after the use of substances which probably do bring about a large scale destruction of tubercle bacilli. Considerations of this kind lead to the conclusion that the failure of dyes to effect a sterilisans magna under experimental conditions which can be controlled does not absolutely preclude the possibility of their efficacy in the treatment of septicemia.

## STANFORD UNIVERSITY MEDICAL SCHOOL NEWS

The Medical Faculty passed the following resolutions in connection with the death of Albion Walter Hewlett, Professor of Internal Medicine and executive head of the Department of Medicine:

"Doctor Albion Walter Hewlett, who died at the University of Pennsylvania Hospital, Philadelphia, on November 10, 1925, at the time of his death was Professor of Medicine and a member of the executive committee of the Stanford University School of Medicine. He aroused in his students an enthusiasm for the application of scientific methods to clinical medicine. He was a man on whose judgment the medical profession has learned to depend. His research in the field of pathological physiology and his lucid presentation of this subject have placed him in the foremost rank of medical scientists. To his associates, Doctor Hewlett gave unlimited interest in their problems, enthusiasm in their successes and an unwavering loyalty.

"Be It Therefore Resolved, That in the death of Doctor Hewlett, the Stanford University School of Medicine has lost an inspiring teacher, the medical profession has lost a resourceful leader, medical research has lost a tireless worker and we, his associates, have lost a beloved friend."

Emile Holman, who was appointed Associate Professor of Surgery last year, entered upon his duties on December 1, 1925.

The Lane Medical Lectures this year were delivered by Professor Vittorio Putti of the University of Bologna. The subject matter of the course was presented in an admirable manner and aroused great interest among the members of the medical profession who attended. The next Lane Medical lecturer will be R. Magnus, Professor of Pharmacology of the University of Utrecht, Holland, who will probably deliver his lectures in December, 1927.

The teaching in Public Health and Preventive Medicine has been completely reorganized and Professor E. C. Dickson of the Department of Medicine has been placed in charge as acting executive.

The University has received the following gifts that are of interest to the medical school: Donation of \$4000 from Mr. Roy N. Bishop of San Francisco in support of research work on diseases of the kidneys that is being carried on by Dr. Thomas Addis. Donation of \$5000 from Mrs. Dorothy Fries Lienthal, to establish a scholarship in memory of her mother, Florence Hecht Fries, to be known as the "Florence Hecht Fries Scholarship in Medicine."

The Medical Faculty decided last year to increase the number of students to be admitted to the medical school to fifty in each class. The registration of the medical students in the different classes this year is as follows: First year, 46; second year, 50; third year, 35; fourth year, 28; student interns, 27. Total, 186.

"Oh, leave the table while you're hollow and while you still desire to swallow the bill of fare from A to Izzard, from soup right down to chicken gizzard. Then you'll be cured of your diseases, as laundered dog relieved of fleas is." Thus do the wise and learned physicians attack the modern-day conditions. We cure ourselves, by means distressing, and pay the doctor for his guessing."—Walt Mason.



## M. O. R. C.

**Ninth Corps Area—California, Nevada, Utah, Wyoming, Montana, Idaho, Washington, Oregon, and the Territory of Alaska.**

California is still 693 medical officers short of our quota for the M. O. R. C.—If all county medical societies would make such patriotic response as has been the case with the San Diego and Sacramento county medical societies and their members, the reserve medical officer personnel required from the ninth corps area would not only be promptly enrolled but over-subscribed several times.

The Sacramento County Medical Society became sponsor, by resolution, for the four medical reserve units within its limits, and called upon its members to enroll in the Medical Reserve Corps.

The secretary of that society then addressed a questionnaire to each individual member, and after three months, secured the following interesting results:

Already members of M. O. R. C. or National Guard..	5
Willing to join the Medical Reserve Corps.....	44
Not willing to join the Medical Reserve Corps.....	44
Over age limit.....	7
Physically unfit.....	2
Not qualified; or women.....	3
Out of town; or no response.....	11
Total.....	116

Los Angeles County is showing commendable activity and held a successful medico-military night at the meeting of January 21.

Surely what San Diego and Sacramento counties have done so commendably, can be duplicated by our organizations in other important centers.

## ASSIGNMENTS

**Station Hospital No. 139, Communications Zone:**

Major George S. Martin, Med. Res., Knoch Building, Susanville, California, as Chief of Medical Service.

Major Thomas W. Bath, Med. Res., Reno, Nevada, as Chief of Surgical Service.

Captain Ream S. Leachman, Med. Res., 434 Virginia Street, Vallejo, California, as Medical Ward Officer.

First Lieutenant Edward C. Halley, Med. Res., 4137 Platt Avenue, Fresno, California, as Medical Ward Officer.

First Lieutenant Zach B. Coblentz, Med. Res., Santa Maria, California, as Medical Ward Officer.

First Lieutenant Norris R. Jones, Med. Res., Sutter Hospital, Sacramento, California, as Surgical Ward Officer.

**Eighty-eighth Avacuation Hospital, Sixth Army:**

Major William J. Hosford, 57 Nevada Street, Santa Cruz, California, relieved from assignment as Assistant to Chief of Surgical Service and assigned as Executive Officer and Fire Marshal.

First Lieutenant Theodore E. Reynolds, Med. Res., University Hospital, San Francisco, California, as Surgical Ward Officer.

First Lieutenant Harold E. Fraser, 939 Adeline Street, Oakland, California, relieved from assignment as Medical Ward Officer and assigned as Surgical Ward Officer.

First Lieutenant James P. Warren, Mount Zion Hospital, San Francisco, California, relieved from assignment as Medical Ward Officer and assigned as Surgical Ward Officer.

**General Hospital No. 61 (Sutherland), Zone of Interior:**

Captain Francis A. Goeltz, Med. Res., 1150 East Second South Street, Salt Lake City, Utah, having been assigned to General Hospital, as Surgical Ward Officer, is relieved from his present position and assigned within the unit as Assistant to Chief of Surgical Service.

**Eighty-first Evacuation Hospital, Third Army:**

Captain Lionel A. B. Street, Med. Res., 1023 Pacific Mutual Building, Los Angeles, California, as Evacuation Officer.

Captain Jerome H. Titus, Med. Res., 128 El Morado Court, Ontario, California, as Surgical Ward Officer.

First Lieutenant George A. Nelson, Med. Res., Loma Linda, California, as Surgical Ward Officer.

First Lieutenant Edwin L. Hansen, Med. Res., White Memorial Hospital, Los Angeles, California, as Surgical Ward Officer.

First Lieutenant Clyde E. Harner, Med. Res., 1066 Cherry Avenue, Long Beach, California, as Surgical Ward Officer.

**Nintieth Evacuation Hospital, Sixth Army:**

Captain William O. Weiskotten, Med. Res., 1101 First National Bank Building, San Diego, California, as Roentgenologist.

**General Hospital No. 35, Communications Zone:**

Lieutenant-Colonel Percival G. White, Med. Res., 508

South Serrano Avenue, Los Angeles, California, as Chief of Medical Service.

**Station Hospital No. 146, Communications Zone:**

Major Henry A. Barclay, Med. Res., 2144 Madison Avenue, San Diego, California, as Medical Ward Officer.

**Medical Laboratory No. 5 (Aviation), Communications Zone:**

Captain Arthur L. Gagnon, Med. Res., 429 Electric Building, San Diego, California, as Psychologist.

## THE PACIFIC COAST SURGICAL ASSOCIATION

will convene in Del Monte, February 26 and 27. The officers of this association are:

Charles D. Lockwood, Pasadena, Calif., president; Stanley Stillman, San Francisco, Calif., first vice-president; Wallace Terry, San Francisco, Calif., second vice-president; Edgar L. Gilcreest, San Francisco, Calif., secretary.

Clinics will be held in San Francisco two days previous.

Arthur D. Bevan of Chicago will be a guest of the association and the title of his address will be "Pathology Diagnosis and Present Status of Surgical Treatment of Peptic Ulcer."

**Injection of the Sciatic Nerve as Substitute for Femoral Periarterial Sympathectomy—**As sympathectomy is not without risks and is attended by conflicting and irregular results, the sciatic nerve was turned to by K. P. A. Taylor and J. B. Rice, Philadelphia (Journal A. M. A.), as a means of securing vasodilatation and improved circulation in the extremities in the cases to be reported. Twelve patients, all males, ranging in age from 9 to 70, suffering from extensive tropical ulcer of the lower third of one leg, were subjected to open injection of the sciatic nerve. The nerve was exposed in the middle third of the thigh (to avoid the highest muscular branches) and injected with a hypodermic needle and Luer syringe. Six patients were injected with physiologic sodium chloride solutions, solutions of procaine and 5 per cent alcohol solutions with slight or no vasodilatation. The remaining six were injected with 15 per cent alcohol so as to produce pronounced "ballooning" of the nerve for 2 or 3 cm. of its course. Usually from 5 to 10 cc. of the solution was required to produce this, depending on the number of puncture holes that are made with the needle and the amount of solution that escapes. The nerve is lifted up with tapes, and stretching is avoided. In all the cases so treated, vasodilatation of the corresponding foot and lower third of the leg developed, as shown by flushing and hyperthermia of the parts. The average duration of vasodilatation was about one month, and the average temperature increase throughout the entire period was 1 degree C. In general, the patients with some degree of motor or sensory disturbance following the injection showed the most marked vasodilatation, a patient with complete paralysis averaging 2.07 degrees C. difference in temperature for fifty days. In every case, healing of the leg ulcer was apparently hastened by the improved circulation of the limb, all of the cases in which injection was done being healed within fixe weeks. It was evident that injection of the sciatic nerve with 15 per cent alcohol is a far more reliable means of producing hyperthermia than is periarterial sympathectomy of the femoral artery. It was found of use in the treatment of tropical leg ulcer. The more prolonged the infiltration of the nerve, and the more handling, needling and traction employed, the greater will be the degree of interruption. Thorough injection of 2 or 3 cm. of the nerve is necessary, with even distribution of the solution throughout the nerve. Patients who are thin and emaciated should be injected less vigorously than well nourished subjects. Any paralysis or paresis is of comparatively short duration (from two to three months). Arteriosclerotic patients do not respond well. The indications for sciatic injection are those for sympathectomy; i. e., any condition in which it is desired to improve the circulation of an extremity, such as threatened gangrene, Raynaud's disease, intermittent claudication, erythromyalgia, early tuberculosis, ulceration, trophic disturbances, etc. It is not of value in arteriosclerotic gangrene and Buerger's disease.

# S. M. A.

*Prevents Rickets and Spasmophilia*  
in addition to giving excellent  
nutritional results in most cases

THE S. M. A. FAT which resembles breast milk fat, both chemically and physically, also contains an adequate amount of cod liver oil for the prevention of rickets and spasmophilia. In addition, the kind of food constituents and their correlation in S. M. A., also play a role in the prevention of rickets and spasmophilia. In feeding S. M. A., therefore, the infant automatically receives an adequate amount of cod liver oil.

### *Other S. M. A. advantages*

1. Gives excellent nutritional results in most cases. That is the experience of thousands of physicians.
2. No modification is necessary for normal, full-term infants—it is possible to give it, in the same strength, to infants from birth, to two years of
- age. Only the total quantity is increased as the infant's caloric requirements increase.
3. It is easy for the physician to prescribe—no complicated formulae to remember.
4. It is simple for the mother to prepare—just add boiled water.

*Write for literature and liberal trial package.*

## *Fine Products for the Infant's Diet*

SYNTHETIC MILK ADAPTED  
TO BREAST MILK



### S. M. A.

IS MANUFACTURED  
BY PERMISSION OF  
THE BABIES'  
AND CHILDREN'S  
HOSPITAL OF  
CLEVELAND

THE LABORATORY PRODUCTS COMPANY  
Cleveland, Ohio



ALL RELIABLE MAKES OF

# SERUMS—VACCINES—ANTITOXINS

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## ST. JOSEPH'S HOSPITAL

SAN FRANCISCO,  
CALIFORNIA



Buena Vista and Park Hill Aves.

A limited general hospital conducted by the Franciscan Sisters of the Sacred Heart. Accredited by the American Medical Association; accredited School of Nursing. Open to all members of the California Medical Association.

## CLINICAL LABORATORY

*of*

Drs. Brem, Zeiler, Hammack and Woolley

WALTER V. BREM, M. D.

ROY W. HAMMACK, M. D.  
PAUL WOOLLEY, M. D.

A. H. ZEILER, M. D.

*Service limited to hospitals and to doctors eligible to membership in the American Medical Association, and to dentists and veterinarians who are members of their official societies.*

*Exceptions—non-medical laboratory work and governmental agencies.*

### Pathologists to the Following Hospitals

Angelus Hospital, California Lutheran Hospital, Hospital of the Good Samaritan, Kaspere Cohn Hospital, Santa Fe Hospital.

### Consulting Pathologists to

Kern General Hospital, Los Angeles General Hospital (Dr. Hammack)

1003 Pacific Mutual Building, Los Angeles, California  
Telephone: METropolitan 4720

# CALIFORNIA AND WESTERN MEDICINE

OWNED AND PUBLISHED BY THE CALIFORNIA MEDICAL ASSOCIATION

*Accredited representative of the California, Nevada and Utah Medical Associations*

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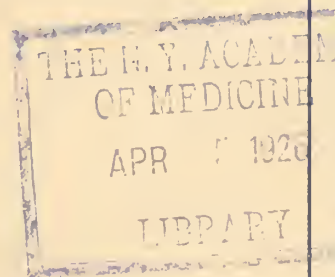
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*Volume XXIV*

**MARCH • 1926**

*Number 3*





# CO-OPERATION

## *In Infant Feeding*

SUCCESS in Artificial Infant Feeding depends largely upon the kind of food selected, and *co-operation* with the mother.

There are many things that the doctor would like to tell the mother, and so we have devised a little book that gives the information just as the doctor would like to tell it himself. The title of this book is

### "Instructions for Expectant Mothers and the Care of Infants"

*The subjects covered are:*

Before Baby Comes  
Urinary Examinations  
Physical Examinations  
Clothing for Expectant Mothers  
The Bowels  
Sleep  
The Bath  
Exercise  
Diet  
Care of the Teeth  
When Baby Comes  
Baby's Clothes  
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Nursing Your Baby at the Breast  
Hours to Feed

Utensils Needed for Bottle-Feeding  
Care of Cow's Milk  
Care of the Nipples and Bottles  
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Weighing the Baby  
Baby's Bath  
Sleep  
Sunlight  
Thumb and Finger Sucking  
Pacifiers  
Bed Wetting  
Adenoids  
Earache  
Colds

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# CALIFORNIA AND WESTERN MEDICINE

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## - BEDSIDE MEDICINE FOR BEDSIDE DOCTORS -

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects and discussants invited. Useful extracts from letters will be published.

### WHAT CONSTITUTES THE MINIMUM EVIDENCE WARRANTING A POSITIVE DIAGNOSIS OF DIABETES MELLITUS?

**The Editor:** The subject of this discussion was suggested by Edward C. Halley of Fresno. We are delighted that he did so, and we believe all bedside doctors will find food for thought in the excellent, interesting and informative manner in which the contributors have handled the subject.

Among the many points brought out is one interesting explanation of why the cost of good medical care is increasing: It was not so long ago that the diagnosis of diabetes depended upon the energy and agility displayed by ants over a specimen of urine. Now we require expensive laboratory equipment and expensive service.

Is such expensive service necessary for all patients? May less expensive methods be considered adequate in certain patients? If so, where shall the line be drawn? How is the physician in rural communities, which constitute roughly half our population, to meet his responsibilities?—are questions that arise out of this discussion, and which sooner or later must be answered.

The editor's mail about Bedside Medicine for Bedside Doctors continues to be very encouraging. Suggestions for other subjects and other discussants are requested; a postcard will do.

James W. Sherrill, M.D. (Scripps Metabolic Clinic, La Jolla, San Diego)—With the introduction of blood sugar analysis the standards of diagnosis of diabetes have been refined, and the glucose tolerance test has replaced our former dependence on urinary analysis. Since the onset of diabetes is slow and insidious, there is a period in which the disease merges by almost imperceptible gradations from slight degrees of impaired carbohydrate assimilation to frank diabetes. It is during this period that the glucose tolerance test is the most practical and reliable procedure for determining the existence of an underlying diabetes. In the strict sense of the word, one is warranted in making a positive diagnosis of diabetes mellitus only when there is demonstrable hyperglycemia with fermentable sugar in the urine in association with one or more of the common signs or symptoms of diabetes. The diagnosis of frank diabetes is usually a relatively simple task, but on account of the frequent occurrence of hyperglycemia and glycosuria in such conditions as cancer, hypertension, infections and pregnancy, there is some difficulty in differentiating non-diabetic conditions from potential or pre-diabetic states.

Hyperglycemia (over .140%) in an individual on normal diet, associated with a fermentable sugar in the urine, warrants a diagnosis of diabetes mellitus, and it is safe to assume that diabetes exists until evidence to the contrary is presented. An elevated blood sugar (over .130%) in a fasting individual (6 hours or more after the preceding meal) with glucose previously demonstrated in the urine warrants the diagnosis. A blood sugar of .180% or more at the end of an hour after the ingestion of a carbohydrate test meal (85 to 100 grams of carbohydrate in the form of starch or fruits with a

general mixed meal), either with or without sugar in the urine, shows that diabetes is present. Hyperglycemia (.140%) in children with dextrose in the urine has invariably proven to be diabetes mellitus provided there is a history of thirst. Thirst is the most important diagnostic symptom during the first and second decades. When it is present there can be but little doubt as to the diagnosis, but without it there is doubt.

The administration of 100 grams of glucose by mouth, while fasting, is the method of choice for the glucose tolerance test. If the blood sugar exceeds .170% at the end of the one-hour period potential diabetes exists. Of 122 tolerance tests which we have recently performed on members of the family of diabetic patients, 44 or 28%, showed large amounts of sugar in the urine. All of them had blood sugar values in excess of .170% at the end of the hour period. Although these individuals did not give symptoms of diabetes, it is fair to classify them as potential diabetics. In 100 tests performed on persons with negative family histories, only 8 or 8%, showed glycosuria. Of 45 individuals with hyperglycemia of .180% an hour after a carbohydrate test meal of approximately 100 grams, all showed glycosuria with subsequent glucose tolerance test. In interpreting the results of the glucose tolerance test the presence of infections, particularly chronic appendicitis and chronic cholecystitis, must be ruled out, since these conditions predispose to glycosuria. If the diagnosis of potential diabetes were made more frequently by means of the glucose tolerance test early prophylaxis could be instituted, thereby preventing the onset of frank diabetes and reducing the ravages of the disease.

Ernest H. Falconer, M.D. (384 Post Street, San Francisco)—The minimum evidence warranting a positive diagnosis of diabetes mellitus is to be found in the urine, combined with the clinical examination of the patient. If any of the clinical symptoms of diabetes, as polydipsia, polyuria, pruritis, skin infections, nerve pains, optic neuritis, loss of strength and, at times, loss of weight, are present together with the repeated finding of glucose in the urine on a normal carbohydrate intake, one is warranted in making the diagnosis of diabetes mellitus. There are certain mild cases, and occasionally elderly individuals, in whom it is impossible to elicit a history of symptoms and whose physical examination gives no hint of underlying diabetes. These patients frequently have been discovered accidentally through the routine examination of urine for life insurance or before an operation. Then there are cases in whom as the result of injuries about the head, traces of glucose may appear in the urine. If this condition is temporary the patient is not to be regarded as a diabetic. Those cases showing traces of glucose perhaps not constantly and with no symptoms, require something more than the minimum described above. If it is not feasible to obtain a blood sugar curve following the ingestion of 100 grams of glucose by mouth, at least a carbohydrate tolerance test can be performed as follows: Give the patient 100 grams of glucose in the form of a lemonade, using plenty of lemon juice and water to make up 300 cc. This should be administered after a six or eight hour fast. The urine is



collected in two periods. The first period covers the first two hours after the ingestion of the glucose, the second from the end of two hours to the end of twenty-four hours. In the normal individual no glucose should appear in the urine in either period. Some authorities hold that traces of glucose may occur in the two hour or first period, but recent work tends to show that such individuals should be under suspicion of having a diminished carbohydrate tolerance. If it is possible, in addition, to obtain blood sugar estimations, at stated intervals, following the administration of the glucose, we have information of the greatest value in distinguishing between the diabetic and non-diabetic individual. It has been found that in the normal individual, the maximum level is reached in about thirty minutes after the glucose is ingested and rarely goes above 0.15 gm. of glucose per 100 cc. of blood, returning to the fasting level of about 0.10 gm. per 100 cc. of blood at the end of one or two hours. In the diabetic individual, the blood sugar rises considerably higher and may reach 0.20 grams per 100 cc. of blood at the end of one hour, and this high level is much prolonged, lasting over the two-hour period. It is the prolongation of the reaction and the high level that constitutes the diabetic blood sugar curve. The diabetic blood sugar curve may be encountered in cases of hyperthyroidism, hyperactivity of the pituitary gland, arteriosclerosis, hypertension, carcinoma of the gastrointestinal tract, and following injections of adrenalin. These conditions are usually suggested in the history and clinical examination. This resume then sketches the minimum evidence on which a diagnosis of diabetes mellitus may be made and does not stress the importance of blood sugar estimations, as it may not be possible for the man in general practice to carry these out.

W. D. Sansum, M.D. (Santa Barbara, California)—In all questionable cases, I consider that positive findings following a glucose tolerance test constitute the minimum evidence warranting a diagnosis of diabetes mellitus. We routinely use Janney's test of 1.5 grams of glucose per kilogram of body weight, to which is added 70 cc. of lemon juice containing approximately 7 grams of carbohydrate, which is deducted from the total sugar given. This is made up in the form of a drink with sufficient water to total 2 cc. of water for each gram of glucose. The test is given on an empty stomach in the morning. A blood sugar is taken immediately before the test, and subsequent blood sugars are taken at one and two hours after the test. A specimen of urine is taken at the time of each blood sugar.

Weight 60 Kilograms.

Glucose 60 x 1.5 grams.....	90 grams
Less 7 grams in lemon juice.....	7 grams
	83 grams

Mix and add water to 180 cc.

The blood sugar preceding the test should not exceed .100 per cent. to .120 per cent. At the end of the first hour it should not exceed .140 per cent. to .160 per cent., and by the end of the second hour it should have returned to normal. All urine specimens should be free from abnormal amounts of sugar. In a diabetic patient the initial blood sugar may not be elevated. At the end of the first hour it should be above .140 per cent. to .160 per cent. and at the end of the second hour the curve may even be higher than at the end of the first hour. A sustained high blood sugar is very characteristic of diabetes. The initial specimen of urine may or may not contain sugar but the subsequent specimens usually do.

Wilder and Sansum found that a normal person's glucose tolerance amounts to .85 of a gram per kilogram of body weight per hour of time. Glucose given in a tolerance test is usually absorbed in the course of two hours. Hence in this test, .75 of a gram of glucose is given per kilogram of body weight per hour of time, or only 12 per cent. less glucose than a normal person can utilize. Some tests call for a fixed amount of glucose, such as 100 grams. This would be too much for a light and too little for a heavy person.

The glucose tolerance test is also important in the diagnosis of kidney diabetes. In this disease small amounts of abnormal sugar are continually passed by the individual even on a semi-starvation diet. Following

the glucose tolerance test, although sugar is found in the urine, the blood sugar curve is normal.

A positive diagnosis of diabetes is often erroneously made, especially in concentrated specimens of urine, when the normal reducing substances in the urine are mistaken for abnormal amounts of sugar. Benedict's solution, and practically all other sugar testing solutions, do not show the presence of less than .05 per cent of sugar. The average amount of reducing substance in the urine is approximately one gram. Suppose a patient passes 1000 cc. of urine in twenty-four hours. One gram of reducing substance in 1000 cc. of urine equals .10 per cent. or sufficient to give a positive test. Such errors could be avoided if twenty-four hour specimens of urine were saved and proportionately fewer or more drops of urine were used in proportion to the total volume. We routinely use with 5 cc. of Benedict's solution 2 drops of urine for each 500 cc. of the total volume.

Edward C. Halley, M.D. (Mattei Building, Fresno, California)—The persistent finding of fermentable sugar in the urine of a person on an average American diet plus an elevated blood sugar, or a definite hyperglycemia with or without glycosuria following a satisfactory glucose tolerance test, in the absence of those other conditions frequently causing hyperglycemia, constitutes the minimum evidence warranting a diagnosis of diabetes mellitus. The conditions, aside from true diabetes, most commonly causing hyperglycemia are increased intracranial pressure, thyroid disturbance, malignancy, infections, pregnancy and renal glycosuria. In renal glycosuria, and these other conditions, however, the blood sugar concentration does not go up after a test meal as in diabetes. Of course it is always possible to have any one of these conditions superimposed upon a true diabetes.

In the first category the urine examined should be a twenty-four hour specimen. Repeated finding of fermentable sugar in the urine, in addition to a blood sugar of .130 per cent or over four hours following the last meal spells diabetes. The patient need present no clinical symptoms of diabetes. In these cases, however, one is often reassured in the diagnosis by eliciting a history of previous or present overweight, a positive family history, or the presence of arteriosclerosis. A majority of diabetics give a history of overweight, fifteen to twenty per cent of the cases a positive family history, and if all cases were recognized no doubt the percentage would be doubled. Approximately one hundred per cent of diabetics have arteriosclerosis to a degree corresponding to their age. In the second category a prolonged high blood sugar showing over .150 per cent two hours or more after a test breakfast of .7 gm. glucose in liquid form per pound of body weight taken on an empty stomach warrants a diagnosis of diabetes mellitus. Under these conditions the presence or absence of sugar in the urine is a negligible factor. A person may have a high blood sugar without sugar appearing in the urine. A blood sugar determination should be made at the end of a four-hour fast the day preceding the test breakfast and one at two and three hours respectively following the glucose ingestion. The characteristic feature of the diabetic blood sugar curve after a glucose tolerance test is the fact that a new high sugar level is so long maintained. With a non-diabetic patient even though the blood sugar was somewhat high the day previous to the test, the sugar level would be about the same two and three hours after the glucose tolerance test.

Roland Cummings, M.D. (Pacific Mutual Building, Los Angeles)—With a patient about whom there is a question concerning the diagnosis of diabetes mellitus, the best single bit of evidence is obtained from the sugar tolerance test, using approximately 1.5 gms. of glucose per kilo of body weight on a fasting stomach. The blood sugar is estimated just before ingestion of the glucose and one and two hours afterwards. The main feature in the curve is whether it is well sustained into the second hour, although the height of the curve at the end of the first hour is important. By that I mean I would pay more attention to a blood sugar curve which was 100 mgs. at time of ingestion, 150 mgs. at end of the first hour and 140 mgs. at end of the second hour, than I would to a curve revealing blood sugar at 120 mgs. at time of ingestion, 160 mgs. at end

of the first hour and 125 mgs. at the end of the second hour.

Other points of evidence are also important in a border line case, such as the family history, whether the patient is obese or not, the presence of arterial changes and the presence of any of the classical symptoms of diabetes. Another point of interest is whether sugar appears in the urine at the end of the first or second hour during the glucose tolerance test.

Another test that we have found of great importance is the three-day test diet, with a gradually increasing amount of carbohydrates. The first day giving a carbohydrate content of 175 gms. The second day a content of 250 gms. The third day 300 gms. Proteins of approximately 85 gms. and fats of 110 gms. are given each day. The patient saves all the urine passed during the three days of the diet and the day following. If a prediabetic state is present sugar will appear in the urine on the second or third day and if it appears on the second day it will be present in a greater amount on the third day. This puts definite strain on the pancreas. This diet certainly should not be used by any patient in which there is a possibility of severe pancreatic insufficiency.

The most difficult situation in which a diagnosis is needed is one in which there is a question between renal and pancreatic diabetes. With the tolerance test in renal diabetes there would be a normal curve, whereas in a prediabetic state the blood sugar will be well sustained into the second hour. With the three-day test diet sugar will be present in the urine during the first day and may be moderately increased during the second and third days, but not to the degree that would be present in a prediabetic state. The blood sugar, however, in renal diabetes during all three days would be normal, whereas it would tend to rise higher on the third day than it was on the first in a prediabetic state; hence, in taking the three-day test diet it is well to estimate the blood sugar as well as the urinary sugar.

**R. Emmet Allen, M.D.** (University of California Hospital, San Francisco)—The classical diagnosis of diabetes mellitus demands the finding of one or more symptoms or signs of the disease, identifiable glucose in the urine and hyperglycemia. The various gradations of from mild to severe forms of the disease are now more generally appreciated. The so-called prediabetic cases and the mild cases deserve as thorough treatment as do the severe ones.

Blood sugar determination is absolutely necessary in the majority of cases to make a positive diagnosis. The severe cases do not always require this for the history, physical and urinary findings are typical.

The mild cases are most frequently overlooked and many of them could have been saved from becoming severe had their symptoms of polydipsia, polyuria, polyphagia, etc., or other manifestations of the disease been inquired about or further investigated. The history of polydipsia is of great importance and a majority of the mild cases have, or have had it, even though no other symptoms have been noticed. Often it is only noticed after the evening meal. The presence of any of the classical symptoms demands further investigation.

The urine may not show sugar on an average diet because of the mildness of the disease or because the height the blood sugar must rise to before the kidneys excrete sugar is not reached. Many factors determine the kidney threshold and it can vary to a wide degree in different individuals.

Glycosuria plus a fasting blood sugar above 0.130% (taken six hours or more after an average meal), or above 0.140% in a patient on an average normal diet is conclusive evidence of diabetes mellitus, unless the later evidence to the contrary is overwhelming. Hyperthyroidism, hyperpituitarism, arteriosclerosis, carcinoma, hypertension, infections, pregnancy, brain injuries and venal glycosuria often offer confusing findings. Clinical study, including blood sugar curves after a known amount of glucose has been given, aid in the differential diagnosis.

100 gm. glucose, given as a palatable drink to adults (preferably after the usual night fast) and proportionately less for children, preceded by a fasting blood sugar determination and followed by determinations one hour

and two hours after ingestion, are necessary for the curve. A blood sugar higher than 0.175% at the end of the first hour period will establish the diagnosis. The percentage may go higher, remain stationary, or fall during the succeeding hour, depending on the severity of the disease. Glycosuria may, or may not, be present. Normal people do not show a higher percentage than 0.160 at the end of the first hour.

**Bertrand Smith** (Los Angeles Metabolic Clinic, 1032 West Eighteenth Street, Los Angeles)—The positive diagnosis of diabetes mellitus requires the demonstration of a limitation in the ability of the body tissues to utilize glucose. This tolerance limit for glucose is definite and, when the glucose-yielding value of the diet exceeds this limit, there is a resulting increase in the glucose content of the blood stream and, usually, the appearance of abnormal amounts of sugar in the urine that give a positive reaction to all the tests for glucose.

When a patient with severe or even moderately severe diabetes calls on his physician, his prominent symptoms are usually a loss of weight and strength, with an excess thirst and polyuria. Urine analysis shows the presence of a fermentable, dextro-rotary sugar and the fasting blood sugar value is found to be well above 140 mgs. per 100 cc. of blood. The diagnosis of diabetes is usually warranted when such clinical and laboratory data are found.

In the milder forms of diabetes the problem of diagnosis is not so simple. Excessive thirst and loss of weight and strength may not be noted. The presence of sugar in the urine is often found accidentally, and has usually not been definitely identified as glucose. The feeding of a definite amount of glucose after an overnight fast will be an aid in determining if there is present any lowering in the glucose tolerance, but the importance of such a test lies almost entirely in its negative value. When the curve of the blood sugar readings, made hourly or half-hourly after the glucose feeding, follow the normal type we can be assured there is no disturbance in glucose tolerance and no degree of diabetes is present. Should the curve indicate a disturbed or lowered glucose tolerance, either by the high rise or delayed fall, we are still not justified in making the diagnosis of diabetes. There is a rapidly growing list of diseases other than diabetes that give a curve indicating a lowered glucose tolerance. The nature of the glucose tolerance curve may be influenced by the previous diet, even if the diet has been altered more than twenty-four hours before the glucose feeding.

Pemberton and his co-workers find curves of lowered tolerance in normals merely by changing the blood supply to certain muscle groups. It is necessary, therefore, to find more definite data that will permit a diagnosis of diabetes mellitus in the milder grades of the disease than can be found in the glucose tolerance test alone.

An analysis of the urine voided one, two and three hours after a meal whose food values are known, together with an estimation of the blood sugar value at a three-hour period after eating, may be sufficient to show the characteristic limitation in glucose tolerance that specifies diabetes. Joslin suggests giving two successive meals, each of which contains 100 to 150 gms. of carbohydrate, 25 gms. of protein and 25 gms. of fat. The finding of a glycosuria after the second meal, with a hyperglycemia at the three-hour period after eating, might justify the diagnosis of diabetes, providing the previous diet had not contained an excessive amount of fat.

Doubtful cases may be placed on graded, isocaloric diets according to the suggestion of Woodyatt. These diets should have glucose values of 100 gms., 200 gms., 300 gms. respectively, with the glucose value carried even higher if necessary. The glucose value of these diets is estimated from Woodyatt's formula of  $G = 100\% C. + 58\% P. + 10\% F.$  The patient should remain on each diet for at least three days, during which time the twenty-four-hour sugar excretions are accurately determined by methods such as that of Benedict and Osterberg (1), Folin and Berglund (2), or Sumner (3).

The output of sugar for the period of each diet is averaged from the daily estimation and the averages are plotted. Presence of diabetes will be indicated by a sharp break in the sugar excretion curve when the increased glucose supply from the diet exceeds the tolerance limit.



Where the sugar excretion remains persistently low blood sugar determination at the fasting period before breakfast may be an aid. Elderly people, especially the obese, with marked arteriosclerosis may show a glycosuria that changes little, if any, on diets that range from low to high glucose values. Such a diet test as this of Woodyatt's is often an aid in differentiating this arteriosclerosis type of glycosuria from true diabetes.

1. Benedict and Osterberg, *Journal Biological Chemistry*, 1921; xlviii, 51.

2. Folin and Berglund, *Journal Biological Chemistry*, 1922; li, 209.

3. J. B. Sumner, *Journal Biological Chemistry*, 1925; lxxv, 393.

F. Stabel, M. D. (Redding, California) — It seems logical that the minimum evidence upon which to base a diagnosis of diabetes mellitus depends upon two important items; first, the time when the patient consults the physician, and second, the methods at the disposal of the physician called upon to make such a diagnosis.

As to the time the patient consults the physician, it would not be far amiss to assume that 90 per cent of patients suffering from this disease seek the services of their physician in order to get relief from certain symptoms. The other 10 per cent might be called "accidental finding of the disease," such as life insurance examinations, routine urinary analyses of persons who undergo examinations, sick or well, at regular intervals, or those consulting their physician from some other known ailment.

Secondly, the means or methods at the disposal of the physician are, to my mind, very important items in this "minimum evidence diagnosis" of the disease under discussion. I have no doubt that in 95 per cent, and possibly more, of the patients who have the disease, the diagnosis can be established by a carefully selected and painstakingly executed sugar test. By that I mean the chemical or sugar reduction tests, as compared to the more refined tests, such as blood-sugar test or glucose-tolerance test. The chemical tests are nearly always available, while the other tests are only available under favorable conditions as to location of patient and physician and the tolerance of the patient's pocketbook.

The classical symptoms following a well established case of diabetes mellitus, such as polyphagia, polydipsia, polyuria, loss of weight and strength, cannot be classed as minimum evidence. Of course, any or practically all of them may be absent and yet the sugar reduction tests leave no doubt as to the nature of the disease.

I would suggest that only the persistent presence of sugar in the urine, as shown by the proper application of sensitive chemical reduction tests, should warrant the diagnosis of diabetes. It is to be assumed that the patient follows his regular carbohydrate diet and that other conditions and diseases known to be responsible for slight amounts of sugar, be ruled out. It is in cases of this latter group that the blood-sugar test, or the glucose-tolerance test, find the best and most beneficent application.

I believe the best practical proof as to the reliability of the reduction tests as a means of diagnosis is the fact that the life insurance companies will risk large sums, everything else being satisfactory, upon a *negative* sugar finding and will refuse any policy upon a *positive* finding.

Whatever test is used, and there are quite a number of reliable ones, learn to do it well, eliminating everything that might interfere with the perfect working of that particular test.

"Office practice offers an excellent opportunity to capitalize the advantages of modern medicine and to turn them to account. The physician who cultivates and encourages office work, while at the same time maintaining his visiting practice, will reap the double benefits of an expansive and elastic field of labor supported by the solidity and permanence of his family relations with his clientele. He can, if he wishes, even develop some special work in his office, such as refraction, nose and throat surgery, or whatever appeals to him, with which he can supplement his general practice, making the latter feed the former."—Medical Standard.

## ORIGINAL ARTICLES

### PROSTATIC OBSTRUCTION

#### MANAGEMENT AND MISMANAGEMENT OF PROSTATIC OBSTRUCTIONS, WITH CONSIDERATION OF RESULTS THEREOF

By GEORGE G. REINLE,\* M. D., Oakland

[*Note—This editor, who examines every sentence in over 2,000,000 words of copy a year, seems to see a worthwhile message in Doctor Reinle's essay for every surgeon. One of our editorial councilors (of Reinle's own specialty) commends the essay as a valuable contribution, and in his letter asks why we don't publish more articles from specialists with messages for all doctors. Why don't we?—EDITOR.*]

The mortality resulting from the operation of prostatectomy is twenty-five per cent for some surgeons.

The mortality resulting from prostatectomy, considering all of the surgeons in the country, is fifteen per cent.

The prostatic mortality by surgeons employing all known precautions and safeguards is three per cent, and this with apologies that it is not less.

DISCUSSION by A. Elmer Belt, Los Angeles; Guy Manson, Fresno; Miley B. Wesson, San Francisco.

THE MORTALITY RESULTING FROM THE OPERATION OF PROSTATECTOMY IS TWENTY-FIVE PER CENT FOR SOME SURGEONS.

THE MORTALITY RESULTING FROM PROSTATECTOMY, CONSIDERING ALL OF THE SURGEONS IN THE COUNTRY, IS FIFTEEN PER CENT.

THE PROSTATIC MORTALITY BY SURGEONS EMPLOYING ALL KNOWN PRECAUTIONS AND SAFEGUARDS IS THREE PER CENT, AND THIS WITH APOLOGIES THAT IT IS NOT LESS.

THE first set of figures is from statistics gathered from various sources, are for all types of hospitals, and embraces the work as done by all types of surgeons—urologists, general surgeons, and "occasional surgeons." Both suprapubic and the perineal methods of enucleation are included, without distinction.

Such figures should give one pause. The full force of their significance is not shown in the high death rate from the operation. Faulty technique may leave the patient with a distressing fistula with which he is troubled for years. Even important contributing factors, both in mortality and subsequent mortality, are faulty technique of preparation and of post-operative care of patients.

If we focus our attention upon the 15 per cent mortality rate—the rate from which the *occasional* surgeon has been eliminated from responsibility—we must confess that it is still entirely too high, and is no better than the prevailing rate of a decade ago. These figures are appalling when compared to the fact that this operation can be and is being done with a loss of under 3 per cent. This lower mortality is consistently maintained not alone by any one or two surgeons and not exclusively by the peri-

\*George G. Reinle (Dalziel Building, Oakland, California), M. D. College of Physicians and Surgeons, California. Practice limited to Urology. Hospital connections: Merritt Hospital and Providence Hospital. Appointments: Chief of Urology, Merritt Hospital; alternate in Urology Alameda County Hospital; visiting Urologist Alameda County Receiving Hospital

neal or suprapubic methods, but by a great number of surgeons operating by either of the two principal methods of enucleation.

Even the above unfavorable showing does not tell the entire story, for the most discouraging figures include only those patients upon whom the final operation of enucleation has been performed. If we go a step further and take into consideration those patients upon whom a preliminary cystotomy was done, or who have had their distended bladders drained by insertion of a catheter, we find that the death rate then rises to  $33\frac{1}{3}$  per cent, properly chargeable against the management of prostatic obstruction.

This is still not quite all of the dark side of the picture, because many prosthetics seeking medical attention are not even examined. These patients may complain of difficulty in voiding, of having to arise early in the morning to void, and of having to strain before getting the stream started; they may even complain of dribbling, yet in spite of these obvious signs of interference these patients are frequently not examined but are merely put off with some palliative or innocuous form of treatment. Quite commonly no effort is made to find out whether or not, after all their straining, these patients empty their bladders. As a little advance over this, these patients may in an emergency be catheterized and even a catheter be left with them for their own use. Then some day comes the calamity; a catheter cannot be introduced and, bladder overdistended, kidneys seriously impaired by back pressure, operation is thought of at a time when the patient has become the worst kind of a surgical risk, or he may, as the result of procrastination, have ceased to be even a risk. Such instances are occurring every day.

If every patient complaining of difficult or frequent urination was examined by someone, a large number of prostatic obstructions would be discovered and the mortality rate be at least kept down to 25 per cent; and if the steps about to be outlined are carried out, it conceivably may be reduced to 3 per cent.

The clear indications in every case of difficult urination are:

Palpate the abdomen for distension of the bladder.

Determine whether there is residual urine.

Palpate the prostate through the rectum.

These procedures should be routine and will reveal the presence or absence of urinary obstruction. It will, of course, be kept in mind that all obstructing prostates are not hypertrophied; to the contrary they may be atrophied, or they may be ordinary in size, with the exception of the middle lobe. Any one of these departures from normal may cause obstruction as complete as the hypertrophied prostate. The enlarged gland is more frequently detected than the other types; even it is less frequently recognized than it would be if patients were examined routinely.

#### CONSIDERING MORE IN DETAIL THE SEVERAL STEPS MENTIONED

Palpation of the abdomen after the patient has voided will disclose whether or not the bladder is

unduly distended. This presents for consideration one of the most important points in the management of these cases. If, finding a distended bladder, one inserts a catheter, either for the purpose of giving the patient relief, or with the intention of determining how much residual urine there is, one may succeed in introducing the catheter, but if the bladder is emptied at this time the result may be disastrous, a consequence happening only too frequently, though the vital statistics do not, for obvious reasons, record the fact. As evidence of the truth of this assertion, Hugh Young, in discussing gradual decompression, says, regarding one of his patients who had been relieved of massive distension by abrupt emptying of the bladder, after walking into the hospital in apparently fair condition, that he was dead within forty-eight hours from uremia.

What, then, is to be done under these circumstances will be discussed in detail presently.

Palpation of the prostate through the rectum seems so obviously necessary a step that it might appear unnecessary to dwell upon it. As, however, it is more often than not neglected, and important information thereby not acquired, it seems worth while to lay some stress upon the point. Insert the finger into the rectum; feel the prostate; go over the whole gland. Explore the upper border, the lateral margins, the median groove. One of the most common errors is in not reaching high enough into the rectum, in not going up over the upper border; in fact, in merely feeling the lower surface. It is well to reach up over the top, then sweep around to the side, and, finally, come down over the center.

Assuming that such examination of the prostate has been made, and a history of difficult urination elicited, and one has made out a very large prostate, the question then is, is it a prostatic hypertrophy, or is it a prostatitis? If the patient is somewhat past middle life, and gives no history of gonococcal infection, prostatic hypertrophy, or a hyperplasia, if you prefer, is quite probable. If the patient is under middle age and gives a gonorrheal history, it may well be that it is a prostatitis. Feel the gland carefully. Is it boggy? Is there fluctuation? Is the gland exquisitely tender? *The hyperplastic prostate is not tender.* See if fluid can be expressed from the gland; catch the drop on a slide and examine the specimen for pus. If the condition happens to be an abscess it will be necessary to be rather careful not to massage too forcibly, for roughness may set up an epididymitis.

The subject of residual urine must be handled with the utmost caution. First to be considered is the individual whose bladder is not palpable, and we wish to learn whether or not he has emptied his bladder. It will be perfectly safe under these circumstances to pass a catheter. The patient may be thoroughly satisfied that he has emptied his bladder, yet catheterization may yield from half an ounce to half a pint of urine. The diagnosis of prostatic obstruction will thereby be established, though not precisely the nature of the obstruction. Determination of the type of obstruction will indicate the nature of the operation required for relief, and this is information which frequently can only be acquired by cystoscopy.



Suppose, however, there is a palpable bladder, possibly distended to somewhere near the umbilicus. If it is an acute distension there is no particular danger in drawing off the urine; but if it is a distension, such as goes with a prostatic obstruction due to anything but an acute prostatitis, then, as a consequence, the laws of hydrostatics must be recognized. Just as a dam thrown across a small stream will cause the water to back up and break through any minor obstruction to the rising water, so the urine in the bladder backing up breaks through the normal resistance of the uretero-vesical valves and forces the urine into the ureters. The kidneys continuously secreting, and the dammed back urine adding to the pressure, induces largely distended ureters, distension of the kidney pelves, and calyces, and in turn pressure upon the whole kidney substance. There ensues a general kidney hyperemia, resistance to the circulation in the kidney, and, as a final consequence, disturbance and impairment of kidney secretion. All of this has come about quite gradually, and nature has, as a result, adapted herself to the changed conditions; has accustomed the system to working under a strain, and so has increased the blood pressure.

If under these circumstances we do either a suprapubic cystotomy or withdraw the urine through a catheter (and there are times, when the bladder is filled with clots, when we have no alternative but to do a cystotomy), as a result there is an abrupt decompression of the whole urinary tract. All of the back pressure being abruptly removed, the distended kidneys collapse, the blood pressure is abruptly lowered, and we may have a condition of profound shock, accompanied by non-secretion of urine and accumulation of end-products of which the patient has no means of disposing. A fatality may follow within a comparatively short time.

These facts have all been known to urologists for quite a while, but only recently has the fullest use been made of this knowledge. What to do and how to do it were the two important questions. The practice for a considerable length of time in caring for greatly distended bladders was to insert a catheter and draw off about half of the urine, and every couple of hours draw off some more urine, the quantity varying with the judgment of each operator. In this manner the bladder was gradually emptied in a period of about two days. This method was an improvement over rapid emptying of the bladder, but it was not ideal because release of the back pressure was intermittent. In 1920 O'Farrell showed that the lowest drop in blood pressure occurred in two to four days, usually forty-eight hours, after decompression, and that at this time kidney function is most impaired. In the same year Von Zwolinberg conceived the idea of attaching the catheter to a long tube and leading the tube to a receptacle placed at such a height that the pressure of the urine in the tube just a little less than balanced the pressure in the bladder. The receptacle was gradually lowered, taking a number of days, until the receptacle was at bladder level, and the bladder completely emptied. This was a tremendous step in advance. It remained, then, only to devise mechanical refinements based upon Von Zwolinberg's principle that a column of water at sufficient

height would balance the urine under any degree of pressure. Bumpus and Foulds devised a system of glass tubing attached to a board, and brought the receptacle to floor level. Shaw and Young, endeavoring to introduce further mechanical refinements, devised a manometer of ingenious construction which at the same time led an antiseptic solution into the bladder, and could be in use while the patient was in a wheel-chair. More recently still, Cunningham has invented a bladder manometer similar to the Tycos blood pressure manometer, using a venturi tube between the catheter and the measuring device. But the principle is the same in all, and is based upon the original Von Zwolinberg device which, simple as it is, is equally as efficacious as the more elaborate devices.

It is not a matter of any great moment what the details of the manometer may be; one is probably equally as good as another. For our own use we have, with great satisfaction, been using a device similar to the one of Bumpus and Foulds.

Having established a diagnosis of prostatic obstruction, the next question quite naturally arising is, when to operate and what type of operation to perform for the relief of the obstruction. More and more the operation itself is being looked upon as not presenting great difficulties. Probably this is true for those who have sufficiently familiarized themselves with a satisfactory technique, but there is the danger, on the other hand, of looking upon prostatectomy as a simple operation, which it is not and probably never will be. Before commenting on the technique of the various operations, however, it seems wise to dwell upon the fact that of even graver importance than the operation itself is the problem as to the time when the patient has become a good operative risk. It is a fact that no matter how good an operation is done, as to its technical details, if the patient is not ready for operation, there are grave chances of losing the patient subsequent to the operative procedure, and if not this loss of the patient, then at least recovery will be exceedingly worrisome. There may be many days in which the patient is in a really dangerous condition; he may have an anurea, low blood pressure, and impaired mentality. He may present all of the symptoms attendant upon the retention of proteins. The laboratory findings may show low phthalein output, low urine urea, high blood urea, and, if the blood creatinin is high, one will have good cause for worry.

All this stormy after condition will have been avoided, however, if the operation has been judiciously timed. When is the patient ready for operation? He is ready when decompression having been gradually accomplished in accordance with the principles and practice previously indicated; when the blood pressure has returned to one normal for the patient's age, and there is no undue spread between systolic and diastolic readings. At this time the phthalein output, which has invariably dropped below normal during the decompression, has come back to somewhere around 65 per cent. The blood urea will be somewhere between ten and thirty grams per hundred, and the blood creatinin about one gram per hundred, with a urine output in the neighborhood of three thousand cubic centimeters

for the twenty-four hours. The patient's mental condition will at this time be found vastly improved and he is ready for operation, with a mortality outlook of better than 97 per cent in his favor.

#### AS TO KIND OF OPERATION—SHALL IT BE PERINEAL OR SUPRAPUBIC

The controversy which for several years raged acutely over this problem has now about subsided, and it is pretty well conceded that it is a matter of no great moment as to which type of operation one does if he does it well. In other words, the decision lies with the operator as to which operation suits him best, though it is fairly generally conceded that the very large prostate is probably more easily enucleated by the suprapubic method, though followers of a certain school do not all make this concession. The small fibrous prostate is enucleated with difficulty by the suprapubic route. But then, on the other hand, the obstruction caused by the small fibrous prostate, as a matter of fact, rarely requires removal of the gland to insure relief. The preferable method is some one of the punch operations—either that of Young, of Caulk, or the wedge operation of Buerger. The Young operation is preferable when there is a definite narrow bar; when the bar is thick, or there is a median lobe which acts as a trap-valve, the Caulk or the Buerger operations are more satisfactory. The decision is based upon review of the cystoscopic findings.

As to the technique of the suprapubic operation for enucleation of the really large prostate: The operation popularized by Freyer, wherein the surgeon supports the gland by a finger in the rectum, breaks through the capsule of the prostate at its apex, and dissects from above downward, is no longer the operation of choice. A modification of the Freyer operation, generally done in two stages, consists in breaking through the capsule at the internal urethral juncture, dissecting downward with the finger and tearing across the urethra below. This, like the original method, is also a blind operation, yet it is one which we must choose if time has elapsed between the cystotomy and the second step. Its disadvantages have been made much of by the advocates of the perineal route, and not without more or less evidence in their favor, particularly for their claim that no operation, each step of which is not under the eye, is in accordance with principles of good surgery.

Fortunately, we have an alternative operation which overcomes the objections mentioned. It is a one-stage operation in which every step is under the eye, and the procedure is much like a tonsillectomy. This is now considered the ideal operation by those not definitely committed to the perineal method as the only one.

Briefly reviewed, the steps are: The exposure, especially if the patient is fat, should be fairly extensive. The table is put in extreme Trendelenberg. The bladder is exposed, and the peritoneum stripped well back. The well-filled bladder is picked up with two silk sutures placed parallel to the median line; a trocar attached to the pump is thrust between these sutures and the bladder emptied without the usual flood. The silk guy-sutures keep the now-collapsed bladder from sinking deep into the pelvis. From a point as high toward the fundus as possible, an incision downward is made in the bladder. The index-finger is inserted and the bladder explored for cal-

culi and to outline the prostate. A Judd retractor is now introduced and the bladder illuminated by a special light in the hands of a nurse. Every portion of the bladder is easily inspected. A prostatic retractor recently devised by Farr is inserted into the urethral portion of the prostate through the open bladder and firmly fixed in place as a nurse withdraws the catheter. The retractor, made like a large corkscrew, is given a half turn and the firmly fixed prostate is elevated exactly as one lifts up a tonsil. The capsule is now carefully snipped through anteriorly to the shaft of the elevator. From here on it is a matter of choice whether the enucleation be done with the finger or with a dull tonsil enucleator. The gland is stripped away from the capsule, *not the reverse*, till one comes to the urethra; this is torn across, and then, working around on both sides and upward, we come gradually to the apex, which is dissected free, and we have the gland on the elevator. The whole procedure has been carried on directly under the eye.

The prostatic fossa is inspected. Whatever bleeding there is will be found to come generally from the edge of the capsule rather than from the fossa. If thought necessary it is a simple matter to take a stitch or so in the capsule, but this will generally be found unnecessary\* if the rest of the technique is carried out.

The bladder is irrigated with fairly hot sterile water. A Pilcher bag-introducer is now put in place, exactly as one introduces a sound. The penial portion of the Pilcher bag is attached to the distal end of the introducer, presenting itself in the bladder; the introducer is withdrawn, carrying with it the tube, and the bag is drawn down into the fossa. Through the upper tube attached to its apex the bag is distended with water, and the lower or penial tube is drawn taut and strapped to the thigh so that the bag fits with moderate pressure as it fills the prostatic fossa. This maneuver serves two purposes—it folds in the edges of the torn capsule, controls any oozing, and also tends to cause the resolution of small tags which, under some circumstances, are rather annoying.

A suprapubic drainage tube is now introduced alongside the upper tube of the Pilcher bag. The bladder is closed in the usual way and, just before the abdomen is closed by layers, the table having been straightened out, a small drain of rubber dam is placed in the space of Ritzeus.

Twenty-four hours later, there being no sign of bleeding from the fossa, the distending fluid is let out of the Pilcher bag, a soft rubber catheter is telescoped into the penial tube of the Pilcher bag, the bag is removed through the suprapubic wound, and as it is drawn upward the soft rubber catheter is drawn into place, without causing trauma to the posterior urethra. At the same time the small rubber drainage in the space of Ritzeus is removed, as well as the drainage tube in the bladder. The catheter is tied in and attached to a drainage bottle. From now on, in place of a sloppy, urine-soaked wound, the patient is absolutely dry and comfortable.

No irrigation of the bladder is attempted, though daily, or even twice a day, the catheter is flushed out with about an ounce of sterile water, and a half-ounce of 1 per cent solution of mercurochrome injected into the bladder.

From now on the important point is to see that the patient has sufficient liquid; not less than one hundred ounces every twenty-four hours in any event, and more if possible. If this is neglected, there is almost always bound to be trouble, and it will be necessary to introduce the fluid by the bowel, under the skin, or possibly both.

This, then, completes the description of the technique of preparation and operation by which it has been possible for the men following it to reduce their mortality to 3 per cent minus.

#### DISCUSSION

A. ELMER BELT, M. D. (Pacific Mutual Building, Los Angeles)—Doctor Reinle's striking presentation of the



factors which now safeguard the lives of those who suffer from prostatic hypertrophy holds lessons for all of us. The sufferer from an hypertrophied prostate is an old man, a poor operative risk. In twenty years of effort, students of urology have reduced his operative mortality from 20 per cent to almost nil. Early recognition of the cause of urinary disturbance, gradual decompression of the overdistended bladder, and careful restoration of the impaired kidney function by patient pre-operative treatment, have probably brought about a greater saving of lives than have improvements in operative technique. These are procedures within reach of all of us, and their importance cannot be overemphasized. Through their aid the urological surgeon is winning the fight for the safety of his patient, and the advance represents a brilliant chapter in surgical achievement.

GUY MANSON, M. D. (Mattei Building, Fresno, California)—I am glad to see Doctor Reinle lay stress on the fact that it is the preparation of the patient for operation, rather than the type of operation performed, that is important. I believe there has been too much stress laid on the type of operation employed, and one is apt to get the impression that this is more important than the preparation of the patient.

I believe Reinle has not emphasized quite enough the point of the elective time to operate. It is desirable, of course, to bring the patient's kidney function and blood urea as nearly back to normal as is possible. There are many of these old men, however, whose phthalein output will never reach near 65 per cent or their blood urea thirty grams per hundred; and yet if their phthalein output and blood urea have reached a constant level, where it does not change further, it will indicate that the kidneys have adjusted themselves to the decompression and the patient is still a good operative risk. Another point in the after care, not mentioned by Dr. Reinle, is the importance of getting these old men out of bed as early as possible. I have seen a patient develop a hypostatic pneumonia as late as six weeks after operation.

MILEY B. WESSON, M. D. (Flood Building, San Francisco)—All doctors, irrespective of their specialties, are interested in the subject of prostatism, perhaps because at least 30 per cent of them over 50 are prospective operative subjects.

Prostatic hypertrophy rarely occurs before the age of 50; however, the same symptoms, complications and treatment go with a median bar, and since such may be present from birth, this paper considers patients of all ages.

The science of urology is only about 25 years old, consequently many who practice it have not yet learned to identify the fundamentals. For years a fight has raged between the advocates of the suprapubic and the perineal routes of approach to the prostate. The followers of one school had practically no mortality, whereas those of the other had an enormous death rate. The real difference was not the method of surgery used, but the lack of pre-operative preparation by one group.

Hugh Young is generally considered the father of modern urology, and his claim to fame does not rest wholly upon his organizing ability or his brilliant surgery, but to the fact that he was the first to realize the value of giving his prostate patients large amounts of water in preparing them for operation. Twenty-seven years ago he reported giving a patient 3200 cc. of saline within one hour; and today his patients, while awaiting prostatectomy, receive from 3000 to 5000 cc. of water by mouth per day, and often infusions in addition. On the return from the surgery, hypodermoclysis of 3000 cc. is given immediately. And yet the routine in most hospitals is to give hypodermoclysis only in extreme cases, and 750 cc. is the regular amount! *In other words, the average surgeon is hunting for something complicated and has not yet learned that the mortality rate of prostatectomy is in inverse proportion to the water intake.*

This is well illustrated by a patient who was considered inoperable because his phthalein could not be made stable nor his blood urea be reduced to normal, although he had been in the hospital undergoing preparation for five months with a fluid intake of over 3000 cc. per day. This was increased to 5000 cc., with no reduction in the blood urea. Then in addition daily hypodermoclysis of 5000 cc. was given for one week. The blood urea dropped

to normal, the phthalein became stable, a prostatectomy was done, and a hopeless invalid was returned to work.

It is desirable but not necessary for a patient to have a high phthalein output; one that is low but stable indicates a good risk. The dangerous operative risk is the patient who has a variable phthalein that ranges from 65 per cent to 15 per cent and never remains the same.

Within the last five years attention has been called to the fact that the sudden emptying of a chronically overdistended bladder tends to cause uremia. I am reminded of the 60-year-old man who was examined by a physician because of pulmonary symptoms and found to have a bladder extending above the symphysis and an overflow incontinence with calcareous deposits over the scrotum. He was catheterized and 4500 cc. of urine was removed. The blood urea was 90 mg. Following the use of a retention catheter and forcing fluids after eight days, the phthalein was 45 per cent in the first hour and 10 per cent in the second hour, and a successful prostatectomy was done.

Kidneys accustomed to function against back pressure cannot suddenly adapt themselves to the absence of this pressure and an anuria develops. Regurgitation of vesical contents into the ureters has been recently demonstrated experimentally in animals by Graves and Davidoff, but as yet it has not been proven in man. Far worse is the prognosis for the patient who has a distended bladder with a sterile residual urine, as the experienced urologist has learned that such patients have no resistance and tend to succumb to post-operative infection.

If all surgeons performed their suprapubic prostatectomies according to the technique described by Doctor Reinle, making the incision high so as not to open the space of Retzeus to infection, the only advantage of the perineal approach would be the fact that the patients can be put up in a chair on the second day, thus insuring against hypostatic pneumonia. Reinle's paper is of additional value because of the warning it conveys to the surgeon who is prone to operate before the patient is properly prepared.

## THE RELATION OF PROTEIN FOODS TO HYPERTENSION

By ARTHUR N. DONALDSON,\* M. D., Loma Linda

*The results of this study support the suggestion that hypertension may have its beginnings in a type of dietary that produces such a degree of endocrine stimulation as to develop an irritable vasomotor system with its resulting transitory, then permanent alteration in blood pressure.*

DISCUSSION by Lovell Langstroth, San Francisco; Samuel H. Hurwitz, San Francisco; W. D. Sansum, Santa Barbara.

OUR clinical impressions, or personal opinions, are quite largely responsible for the present-day fashion of protein proscription in cases of hypertension. Barker tells us that we have no definite facts that point to any of the food substances as having a causative relation to blood pressure changes, and a perusal of the literature shows that concrete experimental facts are hard to get. Some reliable work has been done, however, and this seems, in part at least, to upset the prevailing therapeutic notions.

Mosenthal, Strouse, and Kelman have made some interesting and valuable clinical observations, from which they have drawn the conclusion that alterations in protein intake do not materially affect blood pressure. Newburgh reports kidney lesions on his high protein feeding experiments, but an absence of blood pressure changes. Herrick thinks that carbohydrate is far more dangerous than protein, and

\* Arthur N. Donaldson (Loma Linda), M. D. College of Medical Evangelists, 1915. Hospital connections: Loma Linda Sanitarium and White Memorial Hospital, Los Angeles.

## BLOOD PRESSURE FINDINGS—CONTROL AND MEAT DIET

—1—		—2—		—3—		—4—		—5—	
Control	Meat	Control	Meat	Control	Meat	Control	Meat	Control	Meat
108—64	125—66	110—64	120—62	112—62	124—68	102—60	115—62	106—64	112—72
110—64	122—68	100—58	122—68	108—60	122—64	100—60	120—66	108—64	116—68
108—66	124—68	106—60	120—70	114—62	128—68	102—60	120—66	108—64	115—64
112—68	128—72	104—60	120—68	110—62	120—66	102—60	114—66	104—64	118—72
108—66	122—66	104—62	118—66	110—62	122—66	104—62	116—64	106—62	115—68
108—64	124—68	106—62		108—62	122—66		114—66		
109—65	124—68	105—60	120—66	110—62	123—66	102—60	116—65	106—63	115—68
Average Control, 108—62				Average Control, 104—61					
Average Meat, 122—67				Average Meat, 115—66					

Average for all five—Control, 107—62; Meat, 120—66. Per cent increase, 12—6.4.

that protein need not be restricted unless there is a demonstrated incompetence of the kidney.

The therapeutic excuse for the interdiction of proteins is thus assailed. The deductions thus drawn have come from observations made on animals or on hospital patients, most of whom are well along the cardio-vascular road. It is hardly reasonable to assume that the observed effect of protein on the blood pressure of these subjects should establish the fact that a high or low protein intake may not affect the blood pressure in a normal individual or one in the pre-sclerotic stage of hypertension.

The question of how a variation in protein intake may affect a normal individual brings us into the field of preventive medicine, and is perhaps of as much importance as the study of methods aimed at the salvaging of our cardio-vascular wrecks.

Joseph Pratt of Boston has suggested a division of hypertension cases, showing no renal involvement, into three groups as follows:

1. Vasomotor neuroses with transitory hypertension. These people are subject to vasomotor spasms on mild provocation, due to disturbances from within or without.

2. Primary permanent, or essential hypertension. No other sign of disease exists. The vasomotor system is in a state of increased tone, constantly maintained. O'Hare found that these people responded to an injection of epinephrin with an unusual blood pressure increase, thus seeming to substantiate the idea of a vasomotor system on a hair-trigger.

3. Localized arteriosclerosis.

Pratt holds that these divisions constitute stages of the same disease, the one merging into the other in the process of time, if the causative factors persist. We are led to believe, furthermore, that Pratt is suspicious of the endocrines in these cases. He is not alone in this opinion. Engelbach makes bold to state that comparatively few cases of hypertension are found independent of vasculo-renal disease, which cannot be classified in the endocrine group. Janeway tells us that further work will lay more and more emphasis upon the endocrines as intermediaries in the mechanism of hypertension. Ophuls endorses this view.

In a recent article Herrick reports a series of hypertension cases in which a considerable number, upward to 30 per cent, had hyperglycemia, although there was no parallel between the height of the blood pressure and the sugar content of the blood. The cause for this is unknown. One hypothesis offered, however, is that the chromaffin system is over-active for some reason or other, and that it naturally

has its effect on glycogenolysis. Thirteen years ago Neubauer noted the same thing and suggested that the adrenals might be a factor. Of interest, also, in this connection is a report from Vienna of work done by Hogler. He found that the blood plasma from normal persons inhibits peristalsis in a segment of cat's intestine (epinephrin test), whereas the plasma from patients with hypertension had a stronger reaction, and from two cases of Addison's disease no effect at all. His findings, like Cannon's, will probably be questioned from many quarters.

We have been trying to believe the unproved and apparently controverted theory that a high protein dietary produced an intoxication that whipped up the suprarenals, thus establishing an irritable vasomotor system, and consequently producing hypertension. In this rather premature report of work recently done in our laboratories we will try to show why we have quieted down on our protein notions. In part, our results are in accord with those of Mosenthal; that is, that protein does not materially affect blood pressure. We do, however, have a developing opinion that the extractives of meat have a very decided effect upon blood pressure, and are led with others to suspect the endocrines in the mechanism of production. Our results lead us to no definite conclusions, for we feel that our work has not been extensive enough to justify it. We view the report as food for thought, and wish to present it on that basis only.

Five normal students, four men and one woman, were selected. They were fed according to their basal requirement plus 50 per cent. The distribution of calories varied during the three periods of observation, but the total caloric intake remained the same. For a period of thirteen days they were fed on a lacto-ovo-vegetarian dietary, with a distribution as follows: Protein, 10 per cent; carbohydrates, 65 per cent; fat, 25 per cent. This was practically the same as they had been used to, both as to distribution and amount. For a period of six days the distribution of calories was changed to give 20 per cent protein, with carbohydrate and fat about equal. For a period of sixteen days flesh foods—beef, mutton, and fish—in the form of steaks, roasts, chops, and stews were added. The distribution remained the same as for the high non-meat protein dietary, i. e., 20 per cent protein, carbohydrate, and fat about equal. The students were carefully supervised throughout, and the blood pressure readings taken by the same observer at the same hour. The palpitory method for systolic pressure was used, and for the diastolic reading the point at which the sound disappeared was selected. All blood sugar



estimations were run by the same laboratory technician.

#### HIGH VEGETARIAN PROTEIN DIET COMPARED WITH AVERAGE FOR CONTROL AND MEAT

	—1—	—2—	—3—	—4—	—5—
V. P. ....	112—64	104—62	114—62	105—64	110—66
M. P. ....	124—68	120—66	123—66	116—65	115—68
C. ....	109—65	105—60	110—62	102—60	106—63

Averages—V. P., 109—63; M. P., 120—66; C., 107—62.

335 Men, Vegetarians.—Ages 16-40; majority, 18-24. Range: S., 100-124; D., 54-75. Average: S., 113; D., 65.  
 95 Women, Vegetarians.—Ages 18-24. Range: S., 98-116. Average: S., 106; D., 64.  
 150 Men, Non-Vegetarians.—Ages 18-24. Range: S., 114-144; D., 60-80. Average: S., 126; D., 75.  
 2930 U. C. Men.—Ages 16-40; majority, 18-21. Range: S., 115-136. Average: S., 126.  
 5807 U. C. Women.—Ages 16-40; majority, 18-21. Average: S., 115.

#### BLOOD SUGAR DETERMINATION

	—1—	—2—	—3—	—4—	—5—
C. M.	C. M.	C. M.	C. M.	C. M.	C. M.
111 117	115 101	111 116	114 130	106 124	114 114
109 114	106 108	112 108	117 117		
	114				
110 115	115 107	109 114	111 123	106 119	

#### HIGH VEGETARIAN PROTEIN

—1—	—2—	—3—	—4—	—5—
107.	107	110	108	109

Averages:  
 Control, 110.  
 Meat, 116.  
 Vegetarian, 109.

Average Normals:  
 157 persons.  
 103 mg. per 100 cc. blood.

#### DISCUSSION

The students who served as subjects for this experiment are vegetarians in a restricted sense. All of them like meat and all gave a history of having indulged in flesh foods on special occasions, probably not to exceed once a week. They were, therefore, not unused to flesh foods, and it was for this reason this particular group was selected. On this basis the sudden flooding of the system with a substance to which it had no acquired experience could not be used as an argument against the validity of the results. Furthermore, the figures introduced from 150 students who use meat habitually indicate that the pressure does not recede on a steady flesh diet. Vegetarians, we believe, run a consistently lower pressure than those who use flesh foods. Blood pressure studies from the Orient rather indicate this to be true. We are led to believe that the extractives are the cause of the difference, for if the protein in itself were the responsible agent, an increased pressure would be found on a high non-meat protein diet.

Our blood-sugar findings are hardly even suggestive, but afford room for the suspicion that the adrenals, functioning as detoxicating agents, liberate increased quantities of suprarenins on irritation by extractives. The increased blood sugar could not be due to the carbonaceous residue of the protein, for, if it were, it would be seen also in the high non-meat protein diet.

The results of this study supports the suggestion that hypertension may have its beginnings in a type of dietary that produces such a degree of endocrine stimulation as to develop an irritable vasomotor system with its resulting transitory, then permanent, alteration in blood pressure.

#### DISCUSSION

LOVELL LANGSTROTH, M. D. (240 Stockton Street, San Francisco)—I feel that Dr. Donaldson has begun some interesting and valuable work. There has never been any definite information about the effect of increased protein intake on blood pressure. However, we are scarcely justified in drawing conclusions from his results. The number of experiments is much too small. Furthermore, so far as our knowledge goes, the blood pressure is constantly changing. This is a necessary circulatory adjustment to activity of the muscles or brain, to feeding, and probably to many other factors which are unknown to us. So many influences are at work that it is difficult to control them all and to get a set of conditions which will be the same each day. The figures given would, therefore, be much more convincing if a succession of determinations at intervals of a few minutes had been taken to show what the normal variations were.

Apparently, Dr. Donaldson has found an increase in blood pressure of ten to fifteen millimeters of mercury, due to substitution of meat protein for milk. If this is substantiated by further work it is an interesting result, but does not bear any necessary relation to essential hypertension because the establishment of the blood pressure at a slightly higher level cannot be said to be harmful. It might be more nearly normal than the lower one. It should be borne in mind that milk contains not only a large excess of calcium, but also three vitamins which are practically absent in the cooked meat. It also contains considerable sodium chloride, but probably less than would be ingested with meat, which is usually liberally salted. It is conceivable that the calcium, vitamin, or sodium chloride play a greater part than the purine extractives in causing this apparent increase in blood pressure.

The work is very interesting as a beginning, and deserves further experimentation.

SAMUEL H. HURWITZ, M. D. (516 Sutter Street, San Francisco)—A great many misconceptions underlie the dietetic management of patients with high blood pressure. One of the commonest, namely, the proscription of high protein foods, particularly those of animal origin, as is well brought out by Dr. Donaldson's paper, is not entirely justified on the basis of our present knowledge.

Unfortunately, man is not a particularly good experimental animal on whom to test out the mooted questions relating to diet and high blood pressure. The slightly higher blood pressures which Dr. Donaldson obtained in individuals on diets containing meat proteins, as compared with a lacto-vegetarian diet, are well within the limits of normal variation. That there exists a spontaneous variability of blood pressure has not at all times been sufficiently kept in mind in discussions of this subject. Numerous instances have been recorded by many good clinical observers, notably Mosenthal, whom Dr. Donaldson quotes, of a rise in blood pressure amounting to thirty millimeters of mercury or more, brought on by changes in the emotional state of the patient. I emphasize this point merely to stress the difficulties which must beset anyone who attempts the problem which Dr. Donaldson has set himself. Some better method of studying this problem will have to be devised before we shall be able to settle with any degree of certainty the question of the effect of protein and protein derivatives, meat extractives, and sodium chloride upon blood pressure.

The nebulous status of this subject does not, however, justify an abandonment of the clinical custom of reducing the protein intake in high blood pressure patients. It has long since been shown beyond any reasonable doubt that 75 grams of protein a day are sufficient for a man of average weight—in fact, affords a liberal factor of safety. There could be no conceivable advantage in increasing such a ration. A reckless use of protein in high blood pressure patients is no more justifiable than a reckless reduction of the protein ration.

W. D. SANBURN, M. D. (Santa Barbara Cottage Hospital, Santa Barbara, California)—From our own experimental work we believe that hypertension and its causative blood vessel and kidney lesions may readily be produced by the feeding of high protein diets over long periods of time. A preliminary paper by us—Nuzum,

Osborne, and Sansum—giving the details of this work has just appeared in the March issue of the Archives of Internal Medicine. A second paper, reporting the typical blood vessel and kidney lesions, is now in process of preparation, as all of the surviving, experimental animals have been killed.

We agree with the author that, clinically, individuals who consume large quantities of meats are inclined to have higher blood pressures than those who live on diets containing a preponderance of milk, fruits, and vegetables. High blood pressure, however, is not uncommon in vegetarians who consume large quantities of breads. We do not believe that significant changes in the blood-vessels could take place in so short a time as thirteen days, but we have observed rises in blood pressure with increases in protein intake, similar to those which the author mentions. In our grain-fed rabbits, it required fully eight months to bring about mild hypertension and the associated blood-vessel damage. In our mixed, high protein diets pathological changes began to appear in the course of two or three months. We believe that, in the past, experiments have been carried on for far too short a time. We are now endeavoring to ascertain what factor or factors in these high protein diets are responsible for the pathology. We believe that it may be due to the acid-ash of these proteins, and not to the proteins themselves. Dr. Donaldson's theories concerning suprarenal stimulation, meat extractives and endocrine disorders, should certainly be further investigated.

### VALUE OF ORANGE JUICE AS AN ACCESSORY FOOD

By J. TRACY MELVIN,\* M. D., Porterville

DISCUSSION by T. C. McCleave, Oakland; J. E. Harvey, Pasadena; R. A. Kuhns, San Francisco.

WE ALL know that there are many factors influencing the growth and development of a child besides the food it eats, and the physicians throughout the country have accumulated much material bearing on the subject, as well as upon the questions of the influence of impaired or faulty nourishment upon the physical and mental development of the child in its future adolescence and maturity.

We may accept the statement of Heubner that "persistent malnutrition where the primary causes, e. g., physical defects, insufficient food and faulty food habits, are removed, is characterized by the incapacity of the digestive organs adequately to utilize, in relation to their requirements, the energy assimilated with the food taken."

We find ourselves searching for some accessory food that will remedy that condition by its influence on digestion, and this search has led to the advocacy of various erratic dietary panaceas which have had a longer or shorter vogue in both popular and medical circles in past years. In this connection our attention has again recently been called to the evidence of the value of orange juice as such accessory food, but the relation of cause and effect has been questioned by many on the ground of failure to have identical controls with the class experimented with.

The last four years' experience at the Kaweah Kiddie Camp for Undernourished Children may be

of some value in this connection, because each year it was held under identical conditions. Approximately 100 children, 50 boys and 50 girls, were under observation for one month preceding the camp, were in the camp one month each, and were checked up by the nurses for two months afterward.

These children were under direct medical supervision, with a trained nurse in charge, and an experienced physical director as superintendent. A scientific dietary was worked out for every meal for the entire time, and each year was identical with the other, except that in 1924, through private generosity, we had at our disposal forty-eight boxes of oranges, and each child received 2 ounces of orange juice with each meal.

These children, from 6 to 12 years old, were selected from all parts of the county, from among those in greatest need of improved nutrition and hygienic surroundings. All needed physical defects were removed before the children were admitted to the camp. The improvement in digestion and appetite, and complete absence of constipation among the children who received orange juice was noticeable from the first, and their weekly weights showed a steady and uniform gain above those of preceding camps, where orange juice was omitted. The total gain per hundred children being about 20 per cent greater than the gain at any preceding camp, and the average gain for each individual amounted to nearly five pounds per month.

The following is a comparative summary of the four years.

Summary	1921	1922	1923	1924
Total children.....	112	96	126	96
Number who lost weight	3	2	7	0
Average amount lost.....	1.33	1.5	2	0
Number, no loss or gain	10	8	10	6
Number who gained.....	99	80	109	90
Average gain, pounds....	4	3.4	3.5	4 15/18

Although recognizing that on the average children usually do gain more rapidly during vacation-time than they do in school, and the advantages of camp life with its strict hygienic drill and instruction, and realizing the absence of control groups of children under other conditions for comparison, I nevertheless feel that this experiment indicates that the regular administration of orange juice with children's meals is an important factor in their improved health, demonstrating at least that greater gain in weight is shown under conditions which were as nearly identical as possible with those of other similar groups cared for in the same camp during preceding years.

#### DISCUSSION

T. C. McCleave, M. D. (Medical Building, Oakland)—The experience of Doctor Melvin as to the value of orange juice as an accessory food is confirmatory of the results of a number of other investigators. Under the direction of the Home Economics Department of the University of California, for instance, children of a large school were for a considerable period of time given—one-half of them—milk as a mid-morning meal, and the other half were given orange juice. The increase in weight and height of the orange juice group during the observation period was quite as good as, or even slightly better, than shown by the milk group.

These facts have been used by some enthusiasts to suggest that orange juice may, to some extent, advantageously replace milk in the dietary of children. This is an error, and it should be emphasized that orange juice is, as Melvin has wisely called it in the title of his paper,

\*J. Tracy Melvin (Porterville, California), M. D. Gross Medical College, Denver. Practice limited to Tuberculosis. Hospital connections and appointments: Medical Director of the Springville Joint Tubercular Hospital; formerly member of the Colorado State Board of Health. United States Indian Service physician and President of the Tulare County Tuberculosis Association. Publications include casual articles in the Journal of Clinical Medicine and Colorado Medicine.



a very valuable "accessory" food which should have a place in the daily menu of every child, if possible, but should not be used as a substitute for any of the other essential elements of the diet.

JAMES E. HARVEY, M.D. (Central Building, Pasadena)—Thanks are due Doctor Melvin for calling our attention to orange juice as an aid to optimal nutrition, as it is all too likely to be overlooked through familiarity.

It would be of interest to know which of the four summers mentioned were hot at the particular location of the camp, as it is common knowledge that children do not gain in very hot weather. In the table given there is a gain in the first year over the second of .6 of a pound, which cannot be credited to orange juice. The gain for the fourth year, when oranges were used, is .8 of a pound more than the first year, but there is no exact proof that the gain is due solely to orange juice. From my experience in Pasadena, a cool summer, or even treatment with sun baths, might also have netted that gain. However, it is not unlikely that the use of orange juice was the probable cause of the gain.

In the Polytechnic Elementary School of Pasadena, a choice of either orange juice or milk is offered as the mid-morning lunch. In the nine weeks since January 5 of this year, twenty-two children taking orange juice who were present the entire time gained on an average 2.2 pounds, none losing weight; those taking milk, 2.2 pounds also, with none losing weight; while the average gain of the twenty-two children of corresponding ages composing the control group was but 1.3 pounds with six children losing weight. Six others of the control group were taking orange juice at home and did not lose. All three of the groups drink about the same amount of milk at home, 2.6 glasses for the orange juice children, 2.7 for the milk, and 2.4 for the controls.

The results just given point to orange juice with its vitamin C content, its valuable mineral matter and 12 per cent energy-giving sugar, as proving an excellent food accessory conducive to good growth gain, especially if sufficient milk is also included in the diet.

RALPH H. KUHN, M. D. (135 Stockton Street, San Francisco)—It is to be hoped that this article will be widely read by physicians, as this fruit juice is of the utmost importance in the dietary of infants and children.

Among the general public and even some physicians, the idea persists that one must be cautious about giving any other food than the bottle during the first year. We know, however, that orange juice is not only a most powerful, but a most acceptable anti-scorbutic, and that no matter what artificial food is given, some such agent is necessary to supplement the anti-scorbutic element in cow's milk, which is not very strong, even in raw milk. Therefore, it is my practice to give orange juice at birth if the baby is put on an artificial food, as we have seen many babies which are pale, flabby, and rachitic, when fed exclusively on milk during the first year. No unfavorable effects have been noticed from orange juice, except that occasionally a baby will vomit. Such an infant will probably take strained tomato juice without any disturbance. Let me emphasize the fact that orange juice is not laxative, as is so commonly believed.

After anti-scorbutic treatment with orange juice the baby, which has had a poor appetite, has been irritable and tender to the touch, suddenly regains its appetite, is playful, and can be handled without causing pain. Orange juice is the remedy of first rank and should be given in dosage of about two ounces per day.

Canned tomato is also most efficacious and is sometimes tolerated when orange juice is not well borne.

Orange juice may be given intravenously in those patients where food cannot be tolerated by mouth and where there is extreme prostration. The orange juice is boiled for five minutes and is then rendered neutral or slightly alkaline by the addition of normal sodium hydroxide just previous to its injection. Hess and Unger report three cases where this procedure was carried out without the slightest untoward reaction, and with very prompt subsidence of the symptoms.

We must remember, however, that while orange juice is the most important prophylactic remedy and curative

for infantile scurvy, it is of no value in the treatment of rickets.

As pasteurized milk always contains less anti-scorbutic vitamin than the corresponding milk before it has been heated, and as pasteurization involves, in some cases, not only subjection to heat, but oxidative processes which are destructive of the vitamin, we can realize the importance and necessity of adding orange juice to the dietary of artificially fed infants.

DOCTOR MELVIN (closing) — Referring to the point raised by Doctor Harvey that temperature in the different seasons, given in the comparative table, may be an important variant in causing gains among children, the following is the record for those months of each year as taken by the nearest official observer:

	1920	1921	1922	1923	1924
	July- August	July- August	July- August	July- August	July- August
Mean	98-99	103-100	105-101	99-96	99-100
Daily Mean	73-75	86-81	83-82	75-71	81-81

#### SUPPLEMENTARY NOTE

In July, 1925, there were admitted to the camp, under identical conditions of the previous years, forty-six undernourished girls of an average underweight of  $9\frac{1}{2}$  pounds.

Orange juice, one ounce three times a day, was not available until the second week, after which it was given regularly.

During August there were admitted fifty-eight boys, averaging  $9\frac{3}{4}$  pounds underweight. They received the orange juice the entire time. In four weeks the girls gained an average of 3.9 pounds. Maximum gain,  $7\frac{3}{4}$  pounds. The boys gained an average of 5.4 pounds. Maximum gain,  $10\frac{1}{4}$  pounds.

The maximum daily temperature at this station averaged 101 in July, and 96 in August.

Trepol and neotrepol not acceptable for N. N. R.—The Council on Pharmacy and Chemistry reports that trepol and neotrepol, bismuth preparations for use in the treatment of syphilis, marketed by the Anglo-French Drug Company, are not acceptable for new and non-official remedies. Trepol, offered in the form of ampules, claimed to contain basic tartrobismuthate of potassium and sodium, was rejected because the product does not represent a "tartrobismuthate of potassium and sodium," but is instead substantially a basic bismuth tartrate, and because no adequate tests for the control of its identity and uniformity are furnished. Neotrepol, supplied in the form of ampules containing metallic bismuth in suspension, was rejected because the amount of active ingredient claimed to be contained in the ampules is not in accord with the amount declared to be present.—(Journal A. M. A., Jan. 9, 1925, p. 135.)

"This much I can say with definiteness—namely, that there is no scientific basis for the denial of religion—nor is there in my judgment any excuse for a conflict between science and religion, for their fields are entirely different. Men who know very little of science and men who know very little of religion do indeed get to quarreling, and the onlookers imagine that there is a conflict between science and religion, whereas the conflict is only between two different species of ignorance."—Robert A. Millikan (Collier's).

Nature seems stingy with her rewards. Men strive long and hard for small thrills of satisfaction and climax. The appetite for fulfillment seldom is satisfied. This is nature's way to keep men eagerly on the path to the good. Modern life has developed many diversions, often seemingly innocent, which yet, by dissipating the urge to creative effort, destroy the chief source of human values.—Antioch Notes.

## RENAL COUNTERBALANCE

By FRANK HINMAN,\* M. D., San Francisco

*It is a popular conception that the remaining kidney, if normal, is able to immediately take over the extra burden occasioned by removal of its mate. Upon closer consideration this is found to be only partially true, and renal reserve is seen to be largely potential and to have an anatomic and functional correlation.*

*Studies of structure have shown that growth by hyperplasia or new tissue formation may occur in young animals and man for considerable periods after birth; in human kidneys, up to the fifth or sixth year.*

*Renal atrophy has been almost universally regarded by pathologists as degenerative in type and due to bacterial, chemical or other toxins, producing the well-recognized pathologic condition of cloudy, swelling, and fatty amyloid and hyaline degeneration. But there is also a well-recognized type of atrophy, which may be termed biologic, due to inanition, pressure or inactivity, and it is possible experimentally to produce what would seem to be an inactivity renal atrophy.*

*For clinical purposes, one may distinguish four groups of renal tissue relative to the adjustments that may follow surgery or disease.*

*Readjustments between these four types of tissue lead to four types of counterbalance. The normal renal tissue may show a complete unilateral counterbalance. Readjustments among portions which have an equal qualitative ability to respond instance a co-operative type of counterbalance, whereas readjustments between portions of unequal qualitative ability, irrespective of quantity mass, result in a competitive type of counterbalance.*

*Discussion by T. Addis, San Francisco; Walter V. Brem, Los Angeles.*

THERE are two facts which form the basis of renal counterbalance. These are that the renal mass is divided into two equal portions, a right and left kidney, and that injury or disease is usually circumscribed and rarely diffuse and uniform, even when bilateral, and the majority of renal injuries are unilateral. By counterbalance is meant an attempt on the part of the less injured or uninjured portion to take over the work of the more injured portion.

## EXPERIMENTAL CONSIDERATION

In the experimental study of renal counterbalance there are four conditions for study: First, renal reserve; second, renal hypertrophy; third, renal atrophy; and, fourth, renal counterbalance.

**Renal Reserve**—There has been some confusion as to what constitutes renal reserve, and it is a popular conception that the remaining kidney, if normal, is able to immediately take over the extra burden occasioned by removal of its mate. Upon closer consideration this is found to be only partially true, and renal reserve is seen to be largely potential and to have an anatomic and functional correlation. It is a fact that the renal mass of different species of animals is proportional to the body weight. Small animals have small kidneys and large animals have relatively large kidneys. This is the anatomic reserve. But it has been definitely determined by a great many different observers that, by partial resections,

the normal renal mass may be reduced by one-third, or even one-quarter, and the animal survive. This constitutes the minimal amount of renal mass compatible with life, but this one-third or one-quarter portion has undergone remarkable hypertrophic changes. The functional reserve, on the other hand, has been experimentally tested in a way by a study of the function of the remaining healthy kidney after unilateral nephrectomy. We have found that this kidney is at first unable to completely make good the loss of its mate, and during the first five or six days there is a relative renal insufficiency. This initial insufficiency can be demonstrated also by results following ligation of one branch of the renal artery. However, these insufficiencies are not proportional to the amount of renal mass thrown out of action, and in either case the insufficiency is very quickly removed by an anatomical hypertrophy of the renal mass remaining. Renal reserve is thus seen to be of two types—the native reserve, which is the normal physiologic response to stimulation as possessed by all glands and organs, and an acquired reserve, which is the repair of growth or compensation, in response to overstimulation.

**Renal Hypertrophy**—When one attempts to consider the changes incidental to renal hypertrophy or repair, a thorough understanding of the structure of the kidney is necessary, and it is at once also necessary to distinguish between renal hypertrophy and renal hyperplasia. Studies of structure have shown that growth by hyperplasia or new tissue formation may occur in young animals and man for considerable periods after birth; in human kidneys, up to the fifth or sixth year. And it is also necessary to distinguish, in a consideration of renal hypertrophy between natural growth and compensatory growth. Obviously, the kidney of a child is not as large as after full growth has been reached, nor are the glomeruli and tubules that make up such a kidney relatively as large. All experimental studies on animals must, therefore, take into consideration these two facts. In an adult animal's kidney it has been found, by careful measurements, that growth concerns two structures of the kidney particularly, namely, the glomerulus and the proximal convoluted tubular area, and it has also been estimated that from twenty to thirty days usually are required for the major amount of this growth to occur. When one attempts to apply these anatomic considerations to studies of compensatory repair, this distinction of hypertrophy and hyperplasia has its clinical counterpart. The congenital types of renal compensation, as instanced in the solitary and infantile kidney, are examples of renal hyperplasia, whereas in the clinically acquired types in which repair is due to hypertrophy there are two groups distinguishable—in one the change is by a diffuse mass hypertrophy, in the other by a circumscribed or group hypertrophy.

As an example of mass hypertrophy, is the commonly observed unilateral growth of one kidney following removal or loss of its mate. Some interesting experiments have demonstrated that this mass type of hypertrophy may be bilateral. A typical bilateral mass hypertrophy has been produced by the author by transplantation of one ureter into the duodenum, which throws out, so far as actual excretion is con-

\*Frank Hinman (380 Post Street, San Francisco), M. D. Johns Hopkins Medical School. Practice limited to Urology. Hospital connections: University of California Hospital, San Francisco Hospital. Appointments: Clinical Professor of Urology, University of California Medical School; Urologist, University of California Hospital; Consulting Urologist, San Francisco Hospital.



cerned, the work of one kidney, but, in view of the fact that this kidney continues to receive the same blood supply, it is found to undergo a compensatory hypertrophy hand in hand with that of its mate which actually does all of the renal work. As seen below, however, this initial hypertrophy is not permanent.

The second group in which hypertrophy is circumscribed and not diffuse is of more clinical importance in a consideration of renal counterbalance, and this type of growth may be experimentally tested by comparison of results following various types of repair following relief of ureteral obstruction in hydronephrosis. In one group, in which after a period of complete ureteral block the ureter is transplanted to the bladder and at the same time the opposite kidney removed, it is found that the animal will survive only where the ureteral block has been for a period of two weeks or less.

Even more interesting, relative to counterbalance, are the results that follow transplantation of a completely blocked ureter to the bladder when the opposite kidney is undisturbed. If the ureteral block producing the hydronephrosis has been for a short period, say two weeks, the opposite kidney has not had sufficient time to undergo complete compensatory repair and good stimulation for repair of the hydronephrotic side will be present, whereas if the block has been for longer periods, say sixty days, the complete compensation of the opposite kidney removes any stimulus or need for repair on the hydronephrotic side. It is found, experimentally, that all of these repair hydronephroses, whether of two weeks or sixty days, when the opposite kidney is undisturbed, show early evidences of an attempt to repair. But the point of particular interest in these two types of experiments is that there is found to be a great difference between the condition of this repair, irrespective of short or long obstruction, if examined months or years after the ureteral transplantation. Even as short ureteral block as two weeks will have produced injury which is sufficient, in view of the healthy compensatory mate, to lead to its complete atrophy even after successful ureterocystostomy, upon examination one or two years later, and this leads up to the consideration of the third factor in renal counterbalance, namely, renal atrophy.

*Renal Atrophy*—Renal atrophy has been almost universally regarded by pathologists as degenerative in type and due to bacterial, chemical or other toxins, producing the well-recognized pathologic condition of cloudy swelling and fatty, amyloid and hyaline degeneration. But there is also a well-recognized type of atrophy, which may be termed biologic, due to inanition, pressure or inactivity, and it is possible experimentally to produce what would seem to be an inactivity renal atrophy. The late atrophy, for instance, of an earlier repair hydronephrosis, as has just been mentioned above, is a type of atrophy from insufficient stimulation. Another example of a disuse atrophy may be furnished by the experiment mentioned above of ureteroduodenostomy, in which it was shown that in the early period there was a complete compensatory hypertrophy of the kidney, whose ureter has been trans-

planted into the duodenum, if examined within a relatively short time after the transplantation, thirty to sixty days, but that, if the animal is allowed to survive before being sacrificed for a period of one and a half to two years, this initial hypertrophy has completely disappeared and the same kidney will be found to be a small, almost functionless, or completely atrophic kidney. The explanation of this late period atrophy of an early period hypertrophy after ureteroduodenostomy is not altogether clear, but it would seem reasonable that it results from a gradually diminishing stimulation or loss of work. In a successful experiment, infection has not occurred to produce atrophy, there has been no back pressure or ureteral obstruction to cause it, and it is doubtful if one might presuppose toxic injury from ascension of the contents of the duodenum into the pelvis of the kidney to cause it. On the other hand, it is a well-known fact that kidney activity is not continuous and there are periods of inhibition or lessened activity and, in this experiment, whenever the kidney, whose ureter is transplanted into the duodenum, takes a rest period this influences in no way the accumulation of waste substances in the blood, in view of the fact that the opposite kidney is always doing all the work of actual excretion. Therefore, such rest periods do not lead to any hyperactivity on its part subsequently. Any rest period of the compensatory kidney on the opposite side, however, must be paid for by it by an increase of activity later. This difference in burden of response and the greater predisposition of the transplanted kidney to inhibition would account for the gradual loss of stimulation on one side and its progressive and late atrophy, an example, therefore, of disuse atrophy.

*Renal Counterbalance*—Such experiments as outlined above, with respect to hypertrophy and atrophy, give an indication of the process of renal equilibrium after renal injury, and the occurrence of this counterbalance is beautifully illustrated by the experiment referred to above, in which the opposite compensatory kidney is gradually injured by a partial ureteral obstruction so as to throw a gradually increasing stimulus and demand for work on the repair hydronephrotic side. It is found by such an experiment that an hydronephrosis of thirty or forty days complete ureteral block is capable, under this gradual stimulation, of a complete compensatory repair itself, so that in the course of one or two years, when its mate has undergone a complete hydronephrotic atrophy as a result of partial obstruction of its ureter, the thirty or forty-day hydronephrosis, whose ureter has been transplanted to the bladder, has taken over total renal work and maintains normally total function.

#### CLINICAL CONSIDERATION

In the application of these experimental considerations, the clinical problem is made difficult and uncertain because of our continued ignorance of the mechanism of renal activity and because of the deficiency in our tests of renal function. All tests of function are purely empirical and they have the added defect of indicating renal work for the period of the test and that period only. They give no indi-

cation of what the kidney has done or will do. They are also an extremely uncertain guide as to anatomic conditions and, because of the incidence of inhibition and hyperpermeability, are frequently inaccurate. Renal inhibition is of frequent occurrence and may be reflex, chemical or the result of some type of back pressure. From a clinical standpoint, one speaks of total function and relative function, and tests of excretion are particularly of value as indication of relative function when controlled for factors of inhibition, hyperpermeability and the technical errors of leakage, etc. Better and more reliable tests, as well as specific tests of renal function, are very much to be desired, but not until the mechanism of renal activity itself is better understood will these tests be forthcoming.

Clinical consideration of co-operative and competitive types of counterbalance, as outlined above in the experimental consideration, is particularly of value preliminary to all renal surgery, and such a consideration is worth much more than that of relative function alone because it takes into account the anatomic conditions at the time and the probable anatomic conditions that may be expected to result afterwards. Consideration of counterbalance is valuable in unilateral disease because, when taken in conjunction with surgical risk, it renders renal surgery for unilateral disease much more conservative and under much better control. There are not apt to be so many disappointments after attempts to preserve the unilaterally injured kidney, and the application of consideration of counterbalance is of even greater value preliminary to surgery in bilateral renal disease in which conservation is always indicated.

For clinical purposes one may distinguish four groups of renal tissue relative to the adjustments that may follow surgery or disease. In the first group is normal renal tissue which is known to have a good reserve power and good repair ability so that, with any demand for more work placed on it, an hypertrophy will occur, except under some unusual conditions of inhibition. In the second group is renal tissue which has already undergone hypertrophic changes but which may be expected, under proper stimulation, to undergo additional hypertrophy. In the third group is the diseased or injured renal portion which has a lowered reserve and a diminished ability to repair but which, with relief of injury and proper stimulation, may show considerable repair; and, finally, in the fourth group is the type of renal tissue, called hypoplastic, which has no reserve power or ability to grow, as instanced by the infantile type of kidney.

Readjustments between these four types of tissue lead to four types of counterbalance. The normal renal tissue may show (1) a complete unilateral counterbalance. Readjustments among portions which have an equal qualitative ability to respond instance (2) a co-operative type of counterbalance, whereas readjustments between portions of unequal qualitative ability, irrespective of quantity of mass, result in (3) a competitive type of counterbalance. Failure of response may give (4) renal decompensation.

## DISCUSSION

T. ADDIS, M.D. (Stanford Medical School, San Francisco)—This paper is a brief and incomplete summary of work which has extended over many years. It is an investigation which represents the first persistent and systematic attempt to determine the relation of the process of compensatory hypertrophy to the special problems of the genito-urinary surgeon. This is in itself a significant fact. For a long time operations have been performed without a knowledge of the principles which these experiments reveal, and as a consequence many mistakes have been made, each one of them a commentary on the slow and painful growth of knowledge in the hands of so-called "practical" men. As is the case with all really fundamental clinical work, it is based on a fresh first-hand study of anatomy and physiology and leaves us with fresh problems to solve.

WALTER V. BREM, M.D. (Pacific Mutual Building, Los Angeles)—A discussion of a paper reporting original research is always difficult and usually gratuitous. However, one cannot refrain from commending the spirit that urges one to seek further knowledge, and it is especially inspiring to know that research can be done even by a doctor in the midst of a large and busy practice such as that of Dr. Hinman. Time and again I have heard this feature of Hinman's work spoken of with admiration.

Hinman, in this research, is attempting to clear up the fundamental principles of kidney damage, repair and compensation, and it will go far toward aiding in rational treatment of kidney disease.

## BILHARZIA DISEASE—ITS CURE BY TARTAR EMETIC

By W. B. PALAMOUNTAIN,\* M. D., Oakland

### INTRODUCTORY EDITORIAL NOTE

*Doctor Palamountain's report forms another link in the chain of evidence tending to prove that a specific cure for another important disease has been found. It is an important disease, from which millions of people constantly suffer. They are for the most part residents of the tropics, but the rapid increase in travel is making a knowledge of so-called tropical medicine an essential of every physician's education everywhere.*

*As Doctor Palamountain says, his patient's condition would have been promptly diagnosed by any educated physician practicing in countries where such infections are common.*

*Every physician everywhere should always make a low amplification microscopic examination of every specimen of urine. There are many useful lessons to be learned from such a routine.—EDITOR.*

DISCUSSION by Herbert Gunn, San Francisco; John V. Barrow, Los Angeles; Marshall Chipman Cheney, San Francisco.

IN FEBRUARY, 1916, I was consulted by an Englishman, age 34, who complained of frequent and painful urination, blood and pus in the urine, and blood at stools.

His health as a child had been good, and when 19 years old he entered the South African Constabulary, where he served three years and was never sick. At the age of 23 he first noticed an irritation in the bladder region which he described as a desire to scratch. At 25 he first noticed a tinge of blood in his urine for a short time. Occasionally, during the next six years he noticed some blood in the urine, but was never troubled much by it.

\*W. B. Palamountain (Federal Realty Building, Oakland), M. D. Cooper Medical College, 1904. Practice limited to general and surgery. Hospital connections: Providence Hospital. Publications: Appendicitis on Left Side; Case of Situs Inversus (Journal A. M. A.).



He had no other genito-urinary symptoms and his health was otherwise good. About three and a half years prior to consulting me his bladder began to bother him considerably and had been gradually getting worse. Frequently, small vesicles appeared on the foreskin, developed into postules, and healed, leaving small scars. He had received much treatment, various diagnoses, and no benefit. From 1913 to 1916 his urine was rarely free from blood, but there had been more at times. Pain had become severe at the end of urination, and the last half ounce or so looked like all blood. He had lost ten pounds in weight and lost two or three days from work very two or three weeks, when he had chills and fever and increase in bladder symptoms.

#### STATUS PRAESENS

Well built man, 34 years old, weight 175 pounds, skin pale, no eruption or blemish. No history or sign of syphilis. Wassermann negative. Heart, lungs and abdomen negative. Hemoglobin, 90 per cent; eosinophiles, 2 per cent; the rest of the blood picture negative.

*Urine*—Specific gravity ranged from 1015 to 1025, always acid; much blood, pus and slime; odor very offensive. Trace of albumin, no sugar or casts; swarming with colon bacilli. At times the first urine passed was fairly clear, but at the end almost pure blood was passed, and accompanied by straining and pain. The amount of blood lost varied from day to day.

*Rectum*—Small hemorrhoidal masses that bled easily on touch. Bloody stools said to be frequent. Temperature normal.

Cystoscopic examination revealed severe inflammation of the trigone, more marked on the right side. The mucosa was swollen and looked like raw beef, covered with flakes of pus and mucus and studded with numerous pin-head size, shining, amber-colored tubercles. The right ureteral opening was of the golf-hole type and its margin thickened, very red, and had a few yellow tubercles. Left ureteral opening was normal, as was the rest of the bladder. There was no ulceration, tumor, or stone present. The trigone bled on the slightest touch with the ureteral catheter. Catheterization of ureters was easy and the urine obtained was normal. Radiography of the kidneys was negative for stone. Guinea pig inoculation was negative for tubercle bacilli.

The significance of these shining, amber-colored, pin-head tubercles was not recognized, and practically every recognized method of treatment was followed, with negative results. Finally, suprapubic drainage of bladder was instituted and continued for two months, and the piles were operated upon. The secondary infection of the bladder cleared up and all symptoms left, as long as the bladder was drained; but immediately upon cessation of bladder drainage, the former symptoms of hematuria and pain returned and blood reappeared in stools.

There were in this case certain significant findings that should have rendered the diagnosis easy and would have to a clinician acquainted with tropical diseases. They were, first, the fact that he had lived in South Africa, among men who had been affected with hematuria; second, the cystoscopic pic-

ture of glistening yellow or amber-colored tubercles in an intensely inflamed area without ulceration; third, bleeding from the rectum not due to piles, and only at stool.

Referring to works on tropical disease cause of hematuria, a cystoscopic picture of bilharziasis was found and the diagnosis at once became apparent. The ova were promptly found in the urine, and the identity of the disease was proven.

A search of the literature of the American medical journals for the preceding twelve years showed eight cases reported in the United States, and they were all imported. All writers on the subject reported no known cure for this disease. The patient was informed of the facts and hopes expressed that possibly in the future a cure might be found, and he passed from my observation, but not from my memory.

In 1919 there appeared in the literature an article by Christopherson, working in Khartoum, Egypt, detailing his results in Bilharzia disease by the use of tartar emetic. In 1921 Petillo reported a cure by the use of tartar emetic, and soon after this I located my former patient in Canada. Correspondence revealed that he was still suffering. He was supplied with a complete clinical history and references to the literature, and he placed himself under the care of a good physician and received the injections. The following excerpts from one of his letters testify to the result:

"I know that you will be glad to hear that the treatment was a complete success. The blood disappeared after the fifth injection, and there has been absolutely no sign of blood in the urine since. I can say that I am feeling better than I have for eight years. The doctor made a cystoscopic examination and says that the bladder is almost normal again."

Bilharzia disease (*schistosoma hematobium*) (Egyptian disease) is produced by a blood or a liver fluke. Writers claim 61 per cent of the people of Egypt suffer from it. It is endemic in Africa, hence called African disease. It is found in the West Indies, Panama Canal Zone, one island of Japan, Formosa, the Philippines, China, and elsewhere. Cases in the United States are rare and are all imported, but are becoming more frequent. The disease has long been known in Egypt (3000 years). This trematode is of two sexes, male and female, and about one-third inch long. It inhabits the portal vein, liver, mesenteric and pelvic veins. The symptoms are produced by the ova, which are deposited by the female in the venules of the bladder and rectum. The ova are yellowish in color, 1/200 inch long, and are of two varieties—one having a terminal and the other a termino-lateral spine. They work their way to the interior of the bladder and intestine, where they are protruded, appearing in the urine and feces. They act as foreign bodies, exciting inflammation and causing pain and the escape of mucus, pus and blood, and often resulting in vesical calculi and papillomata.

The life history of this trematode has been worked out by British and Japanese workers, and was completed in 1914. The length of life of the fluke in the human is not known, but that it lives

for many years is certain. The ova hatch out in three to four minutes when in fresh water. Mollusks and snails are the intermediate hosts and the cercaria swarm in polluted water, and promptly attack animal or man by passing through the skin, and gain entrance to the portal circulation. An intense itching of the skin is produced by the penetration of the cercaria. About four weeks after entrance symptoms are noted.

In some, after a few years, spontaneous cure seems to occur, as judged by the cessation of symptoms. In others the infection lasts for life and is malignant, resulting in calculi, papillomata, fistulae, and severe proctitis, and may become generalized and found in the lungs, brain, liver, and other tissue. Up to 1918, no cure was known, and among the Egyptians hematuria was considered as a matter of course, and a sign of manhood and progeny was not expected in its absence.

In May, 1917, J. B. Christopherson, director of the Civil Hospitals, Khartoum, Egypt, began treating Egyptian Bilharziasis by the intravenous injection of antimony tartrate as a routine method and published a paper in the London *Lancet* of September 7, 1918, detailing his treatment. In the June 14, 1919, number of the *Lancet* he published another article, detailing some thirty cases, and stated, "We are justified in saying that it not only kills the parasite in situ, but that later it kills the embryos in the ova deposited; and that the patient is cured not only of his Bilharzia parasites, but that he ceases to be a Bilharzia carrier and cannot propagate the disease."

Since that time quite a few articles have appeared in the literature, mostly by British doctors, detailing their results with the tartar emetic, and confirming Christopherson's claim, and based on several thousand cases.

The treatment consists of intravenous injections of sodium-antimony tartrate in sterile saline solution. The initial dose for an adult is  $\frac{1}{4}$  to  $\frac{1}{2}$  grain in 20 minims of distilled water, diluted with 6 to 10 cc. of sterile saline solution, injected with a 10 cc. record syringe.

Injections are given at first every day or every other day, and the doses are increased  $\frac{1}{2}$  grain each injection until grains 2 or  $2\frac{1}{2}$  are reached. The total quantity of tartar emetic making a course being 20 to 30 grains, and a cure is effected with nearer 20 than 30 grains.

Prompt improvement is noticed after a few doses by subsidence of pain on urination and the decrease in the blood lost. The ova soon begin to take on a cloudy, shriveled appearance and turn dark or black, and usually after about 12 to 20 grains are given the blood and ova have disappeared from the urine. Ova may continue to be found for some time, since it takes some time for all to be extruded, but they are dead. The fact that ova cease to be found in the urine or feces is evidence that the worms are dead.

Tartar emetic is a powerful drug and care must be used in its administration, but few bad effects have been reported.

This treatment marks an epoch in Bilharzia dis-

ease since, up to this very recent discovery, no cure was known.

An excellent descriptive article on Bilharzia by N. D. Brayton, writing from the Panama Canal Zone, appeared in the *Journal A. M. A.* for April 30, 1910, and many articles of great value by British authors have been published in the *London Lancet*, *Journal of Tropical Medicine and Hygiene*, and the *British Medical Journal* during the period 1918 to 1919, in which references to other articles are noted.

#### DISCUSSION

HERBERT GUNN, M. D. (350 Post Street, San Francisco)—The interesting case report of Dr. Palamontain is very instructive from several standpoints. It emphasizes very clearly the advisability of keeping this disease in mind when dealing with hematuria or bloody stools.

The disease is undoubtedly frequently overlooked, which is almost sure to happen unless it is suspected and the eggs specially sought for. The eggs are very large and are readily found only by searching the specimen with the lower power of the microscope, which is not usually done to any extent in the routine examinations of the urine: Under the higher powers or in stained specimen, eggs would be observed more or less accidentally.

Palamontain does not state whether the bloody stools were produced by infection with the same parasite as was found to be the cause of the hematuria or whether a *Schistosomum Mansoni* was the cause of it. The latter parasite is usually the cause of the dysenteric symptoms, though they may be caused by the *Schistosomum Hematobium*. Both parasites are found in Africa, one egg showing a terminal spine and usually found only in the urine, while the lateral-spined egg is found only in the stool.

I have seen several cases of the urinary form in consultation, and in 1905 reported two cases of the rectal form, occurring in Porto Ricans. Since then I have encountered a number of cases of the rectal type, all in Porto Ricans.

JOHN V. BARROW, M. D. (Westlake Professional Building, Los Angeles)—I think this article is well timed and of great value. I have not had the experience of treating Bilharzia, although I have seen one or two cases in which the symptoms seemed to indicate the disease, but found diagnosis proved it to be amebiasis, which responded well to treatment.

I have used intravenous tartar emetic in a number of cases of uncertain etiology, and have had good results; in fact, it is my routine in indolent ulceration of any type. I think this drug in selected cases proves as valuable as arsenic and mercury, and there must be the same care in giving it as in any toxic drug.

MARSHALL CHIPMAN CHENEY, M. D. (Shreve Building, San Francisco)—This case report demonstrates the value of a complete history, physical examination and laboratory tests. A clew to the diagnosis was given by the history of previous residence in South Africa. The physical examination disclosed typical lesions in the bladder. The laboratory tests not only excluded ordinary diseases, but permitted absolute diagnosis by demonstration of Bilharzia ova in the urine.

I have had some experience with the administration of tartar emetic solution intravenously. If the precautions as to dosage, number of injections, condition of the patient, and careful intravenous technic are followed, no harmful effects will follow. However, antimony is very poisonous and its administration by vein must be very carefully watched. I have been hoping to see some reports of the effect on Bilharzia of antimony oxide by mouth, following the method of Sir L. Rogers in treating Ka'a Azar. The oxide is soluble in weak hydrochloric acid, and is excreted by the kidneys. The problem is, whether a sufficient concentration of the drug to kill the parasite can be obtained in the tissues by this method. By starting with one grain after meals, the dose can be gradually increased to 15 grains a day in an adult. Toxic effects can be noted readily, and the dosage can be controlled much more easily than by the intravenous route.



## REASONS FOR THE EARLY TREATMENT OF SQUINT

By M. F. WEYMANN,\* M. D., Los Angeles

*The treatment of squint should begin as soon as the squint is discovered, and the reasons for this are based upon sound physiological principles.*

DISCUSSION by George H. Kress, Los Angeles; Otis Allen Sharpe, San Francisco; J. R. and G. W. Walker, Fresno.

MY PURPOSE is not to go into the details of the treatment of patients suffering from squint, but to cite the underlying principles upon which early treatment is rationally indicated. I shall consider only non-paralytic squint, which is not due to lues, cerebral hemorrhage, or any other definite pathological entity.

In the beginning man developed binocular vision through the peculiar quality of a fusion sense, which sense is not present in the lower animals. Even in man it is not developed at birth, but is gradually assumed during the first years of life. Especially during the first year of infancy does this sense gain a foothold, and it is gradually strengthened during succeeding years until when the child is 7 or 8 years of age the sight of one eye may be lost and both eyes will still move synchronously because the muscles have become accustomed to co-ordination through fusion of the images. Mothers often claim that their infants look "cross-eyed" now and then. This is because they have not yet developed the fusion sense sufficiently to avoid some inco-ordination in movement of the eyes.

### FUSION SENSE DEFINED

The impulses set up by images thrown upon the retina are transferred to the occipital cortex and there fused into one by the fusion sense, this being done to prevent one from seeing two objects where there is really one. But to fuse these images it is necessary that they be as nearly alike as possible, and to this end the eye muscles are co-ordinated to focus the two eyes upon the same object at the same time. When this is not done, double vision and discomfort result. Thus it is the fusion sense which prevents the discomfort of double vision, and this is accomplished by the desire for fusion of images causing the ocular muscles to work in harmony and give one "straight eyes."

But in infancy, when the fusion sense is weak or immature, certain factors may hinder its complete development. And these factors act more powerfully in the case of those infants with an inherently weak fusion sense than in those with a strong one. For it seems that the fusion sense varies in individuals just as does their resistance to infection.

One of the factors which would cause difficulty in the fusion of the images of the two eyes would be a clear image in the one eye and a distorted image in the other. That is, if one eye were highly near-

sighted, farsighted, or astigmatic, and the other eye normal, the two images would be dissimilar and difficult to fuse. Thus, an individual with a weak fusion sense would have difficulty with double vision, and to rid himself of this discomfort would unconsciously cause the abnormal eye to cross so as to make its image completely different and then suppress the image of the crossing eye entirely in the brain. Such a person would really have monocular vision and would be "brain blind" to the image in the crossing eye. As said before, this occurs as an unconscious act to relieve the individual of the discomfort of double vision, and is an easier alternative than to try to fuse the two dissimilar images.

In a child born farsighted in both eyes there is another factor working to hinder the fusion sense and to cause the eyes to become crossed. Normally, an individual, when looking at distant objects, is using no muscular effort in focusing, that is, the focusing apparatus is at rest, and there is very little convergence of the two eyes upon the object. But when such an individual looks at a close object the eyes must not only be focused upon it as one focuses a camera, but must be converged upon it as well. So that any impulse stimulating the ciliary muscle or focusing apparatus must stimulate the internal recti muscles to converge the eyes upon the object at the same time. Now if a child is very farsighted he must not only focus for near objects, but must keep up a constant stimulus to the focusing apparatus to be able to see distant objects distinctly. This stimulus also affects the muscles of convergence and, unless the fusion sense is strong enough to overcome this tendency toward convergence, the eyes will turn in more than necessary, with the resulting formation of two dissimilar images and double vision. To avoid the discomfort of the double vision one eye will be allowed to turn far in and its image will be disregarded. Thus, a convergent strabismus will be produced, and the child will have monocular vision.

The child who is nearsighted has a similar condition to cope with, but here the stimulus to convergence is lessened and the eye usually turns out instead of in. It does not follow that all divergent squints are myopic, and vice versa, but that is the general rule.

As a result of the crossing of one eye and the disregardance of its image by the brain, we have one of the most serious complications of the neglected squint patient. If the eye of an infant is covered at birth, or if it is unconsciously thrown into disuse by crossing, as noted above, the visual acuity of that eye does not develop and it remains amblyopic or partially blind throughout life if the period of disuse is long enough continued. Therefore, if a child whose eyes are crossed is allowed to go untreated until 4, 5, or 6 years of age the vision of the crossing eye is permanently impaired. But if the child can be made to use the crossing eye as soon as possible after the crossing is definitely established, the chances for a return to normal vision of that eye are directly proportional to the earliness with which the treatment is begun.

No child over 2 years of age is too young to wear glasses, and many can wear them under this age

\*M. F. Weymann (418 Westlake Professional Building, Los Angeles), M. D. Washington University Medical School, St. Louis. Practice limited to ophthalmology. Hospital connections: Los Angeles General Hospital, Los Angeles Eye and Ear Hospital, Hollywood Hospital. Appointments: Ophthalmologist Post-graduate school, University of California. Publications: Microphthalmos With Cyst (Amer. Jour. Ophthalmology), Mercurochrome 220 in Ophthalmic Therapeutics (California and Western Medicine).

if necessary. An oculist who gives as his only excuse for not treating a case of squint that the child is too young for glasses indicates that he does not care to take the trouble for the examination of the child. Of course, there are some cases of squint where glasses are not necessary, and the oculist may say so after an examination, but the reason for not prescribing glasses should not be the age of the child.

The refraction should be done under atropin and a careful retinoscopic examination made. If the child is old enough to name pictures, the subjective tests should be used as a check. Correction with glasses, where one eye is normal and the other ametropic, tends to make the images of the two eyes more alike and more easily fusible. In the cases of farsightedness they remove the extra stimulus to convergence, and in nearsightedness tend to increase this stimulus. Therefore, myopic divergent strabismus patients and hyperopic convergent strabismus patients are given as much correction as possible, while patients with myopia and convergent squint, and vice versa, are given only their astigmatic correction and exercises for developing the fusion sense.

After proper glasses have been provided, the crossing eye should be made to work by bandaging the good eye daily during waking hours for a month. Then both eyes are used for a few days, and the covering of the good eye repeated. This will not cause a diminution of visual acuity in the good eye, for when once acute vision is developed in the eye of a child it will not be affected by a few months' occlusion of that eye, and in an adult the eye may be covered for years without the loss of visual acuity. Many adults with cataract go for ten or more years with the opaque lens covering an eye, and upon its removal are restored to practically normal vision. But in the infant under 1 or 2 years of age the disuse of an eye for a short length of time means a permanent loss of visual acuity. Where the parents cannot be trusted to cover the good eye it may be put under the influence of atropin. This is not as good as covering it, but it makes the child use the crossing eye for all close work, or about two-thirds of the time. When the vision of the crossing eye no longer shows any improvement, or when the strabismus becomes alternating, this measure is discontinued. If this treatment is begun when the child is about 2 years of age the vision of the crossing eye may return to normal, but in older children, although it will be improved, it rarely comes back to normal. Even children of 6 years of age and over show marked improvement, as evidenced by one child of 6 years, and whose vision in the crossing eye under the treatment of bandaging the good eye for two months improved from 20/240 to 20/30.

The other item in the treatment of these patients is the exercise of the fusion sense. This is done by means of the Worth amblyoscope, which is an arrangement of prisms and tubes, so adjusted as to allow the cross-eyed individual to see two cards at the same time and to try to fuse the pictures on the cards. For example, one card will be the picture of a bird and the other a cage, the object being to

get the child to see the bird in the cage, or to superimpose the images in the brain.

Very nearly all cases of squint can be cured in this manner if seen early enough. But if the child is allowed to grow older before instituting treatment, the results are not nearly so good. Even if the eyes are straightened by operative procedure the chances of restoring binocular vision are much diminished in the older child. Under no condition is operative treatment to be advised until all of the above measures have been tried and until there has been no further improvement under this treatment in a period of three to six months.

When operation is done it should not be tenotomy of the overacting muscle. If tenotomy is necessary, in addition to advancement of the underacting muscle, which latter operation is that of choice, it should be regulated by setting the tendon back a definite amount and suturing it to the sclera. Otherwise, there is the danger of a later strabismus in the opposite direction. But my purpose is not to go into the details of technical procedure.

In conclusion, I can only repeat that, for the best welfare of the patient, the treatment of squint should begin as soon as the squint is discovered, and the reasons for this are based upon sound physiological principles.

#### DISCUSSION

GEORGE H. KRESS, M.D. (Bradbury Building, Los Angeles)—What Doctor Weymann has so admirably outlined as the proper procedures in treating children with squint cannot be overemphasized.

The heartache of the child as it reaches the age when the stigma of being "cross-eyed" comes home to it, the distress of family and friends, and even the discomfort of strangers who come into contact with a pair of "cross-eyes," should long before now have educated both the medical profession and the laity to the foundation principles that are involved in crossed eyes and their rational eradication. Not infrequently, however, even today, one sees patients where not only the parents, but the attending physicians are not without blame.

Weymann's introduction of the subject most lucidly explains the physiological principles involved in the development of "crossed eyes" and of the partial blindness which usually involves the eye which is off its proper axis.

It is unfortunate that so many of the laity, and worse still, that some physicians seem to feel that the wearing of glasses in early childhood will "weaken" the child's eyes. It cannot be too often repeated that when an eye begins to squint a continuation of the squinting can only lead to disaster to such an eye, both from the visual acuity and cosmetic standpoints.

The indications for the treatment of a developing squint in early childhood are very clear. They are those that are outlined by Weymann in his paper. They may be summed up in the words, "proper glasses and proper eye exercises." When these are instituted early, a very considerable amount of the visual acuity that otherwise might be lost in a shockingly short space of time, because of the discomfort incident to double vision in the child, may be conserved for both child and adult life. And, likewise, a very considerable portion of what is little less than heart-breaking cosmetic deformity can be prevented from developing.

Let all of us who are physicians thoroughly appreciate the fact that we do a child-patient that is developing a squint a gross injustice if we fail to tell the parents that the child should be seen early by a competent oculist, so that the pathology and refractive errors may be determined and the proper treatment started. In this trouble, as in some phases of law, "Time is part of the essence



of the contract." Let us be alert to our responsibilities when such patients come to us, and promptly advise the parents of the nature and consequences of squint when the condition is neglected.

OTIS ALLEN SHARPE, M. D. (Flood Building, San Francisco)—This subject has been very capably and efficiently discussed by Doctor Weymann. Too much cannot be said in regard to urging parents who have children with squinting eyes to have them attended to early, as in most cases the squinting eye very soon loses a good part of its vision, and in a few years will lose all the useful vision, which cannot be brought back except by many tedious hours of work on the part of the parents and discomfort and fretting on the part of the child. Therefore, I urge very strongly encouraging the parents to bring the child early and have a careful refraction under atropin mydriasis. It is little less than a crime to allow a child to grow up with such a deformity as "crossed eyes" when such a condition can be handled so very efficiently if taken early.

There is much in commendation to be said about the work which is now being done in the school department of the larger cities, in examining carefully the eyes of all children as soon as they enter school, and furnishing the right correcting lenses to those needing them.

Also a word should be said about those cases which should be operated. There are certain cases (the particular kind I will not take the time to discuss here) which can never be corrected merely with the use of glasses. These eyes should be operated early. If they are not, the seeing power will not be developed even with the correct lenses. To my mind it is a worse neglect to allow these children to grow into adults with defective eyes than it is to allow the existence of some other deformity, such as that of a leg or arm, which might be corrected.

Also I wish to say a few words in regard to correcting deviating eyes, from the purely cosmetic standpoint. There is a common belief among many eye surgeons that very amblyopic eyes cannot be successfully operated. I have had the opportunity of doing experimental operations upon a great many such eyes, and find that a large percentage can be successfully operated. It may take several operations to get the desired result, but it can be done and should be done whenever and wherever a person's personal appearance can be improved.

J. R. and G. W. WALKER, M. D. (Rowell Building, Fresno, California)—Dr. Weymann has written an admirable paper. If parents are shown that the crossed eye is not at all used—that the child is certainly losing the vision in one eye—they will become keenly alive to following the oculist's suggestions. Certainly, a child is not too young to wear glasses at 2 years, and no one, oculist or family physician, must ever be guilty of advising to wait for the child to grow out of it. They are growing blind or at least sped in that direction. Refraction under mydriatic, supplemented by fusion development, as Weymann suggests, straightens nearly all eyes, and not only straightens, but makes the child change from a one-eyed person to one possessed of two useful eyes, giving the enlarged field and other advantages and a reserve if the straight eye should be lost later in life from some cause.

Simply a beautiful surgical straightening of an eye, commendable though it is, does not often give a good eye where amblyopia previously existed. We have in mind a young man whose crossed eye had been nicely straightened at 23 surgically, who at 24 lost the other one from a wound, and who never did regain vision sufficient to make him able to walk the street. The time to begin treatment of the cases of squint, Weymann includes, is as soon as the case is diagnosed.

Correctly fitted glasses do no damage to any eye at any age. We can only emphasize what Dr. Weymann has said.

DOCTOR WEYMANN (closing)—Doctor Kress has not emphasized any too strongly the embarrassment which these squinting children suffer through the ridicule of their playmates. If, as Doctor Sharpe has said, the eyes do not improve through the regular measures, or if the child is seen after the eye is markedly amblyopic, we should not hesitate to operate, even if the result to be gained is only the cosmetic one. The patient should be told in advance that more than one operation may

be necessary in order that he may not be disappointed if the first procedure does not correct the entire defect. But if we are to gain both the cosmetic effect, and what is most important, good binocular vision, we must get these patients under treatment early. This is well illustrated by the report of Doctor Walker's patient.

## RADIOTHERAPY OF NON-MALIGNANT CONDITIONS

By FRANCIS WILLIAMS,\* M. D., San Francisco

PHYSICIANS, and to some extent people in general, are conversant with the value of radiotherapy in malignancy, and know something of its field of usefulness and the limitations of that field—but I find that some physicians even are scarcely aware of the value of radiotherapy in non-malignant conditions.

During the past eight years I have applied x-ray, radium, quartz light, and electrotherapy to the problems of general office practice, which has afforded opportunity for testing some current and published teachings. From such general experience one gradually comes to rely on certain agents, while rejecting others. Yet, one realizes that other experienced workers often succeed remarkably with the agents we reject, and may reject some agents on which we rely.

To this preface a foreword may be added, explaining the action of short-wave radiation on the tissues treated. The body tissues react in at least three ways:

*Small Dosage*—5 to 25 m. a. minutes—"the ionizing dose," is stimulating to the cellular elements concerned in repair, such as the histocytes and leucocytes; such is the useful dosage in bone tuberculosis, in which condition depressing effects must be carefully avoided. Sampson specifies the "ionizing dose" to be 5 m. a. minutes, delivered with a 5½-inch gap through 1 mm. of Al.

*Heavy Dosage*—50 to 100 m. a. minutes and up—exerts a destructive action on massed cellular products of inflammation, such as leucocytes, plasma and giant cells, hence is efficient in aiding absorption of infective granuloma, carbuncles, and infected cervical glands.

*Large Dosage* also acts by affecting the lining endothelium of the vessels supplying the pathologic condition under treatment; such is the manner in which uterine fibroid is reduced. To the above three actions of radiation may be added the formation of fibrous tissue from reduced cells, and the systemic reaction which causes beneficial results at a distance from the area directly treated.

In addition it is important to ascertain what wave length gives the best selective action on each group of pathologic conditions, and by choice of filters select rays of approximate homogeneity; this is the most difficult field of radiotherapy, if one may judge by the varied techniques found in current medical

\*Francis Williams (1220 Flood Building, San Francisco). M. D. College of Physicians and Surgeons, San Francisco. Interne, assistant visiting physician and assistant visiting surgeon, San Francisco Hospital, 1900-1906. Practice limited to radiology and office treatment. Hospital connections: San Francisco Hospital, 1900-1906; Fairmont Hospital, 1915-1920. Appointments: Professor of Physiology and Embryology, College of Physicians and Surgeons, San Francisco, 1903-1908.

literature. Views upon equivalence of filter material in comparing Al and Cu vary from a ratio of 4:1 up to 20:1, the differences apparently resting on the effects studied. The best filtered x-rays lack the homogeneity of the gamma rays of radium. The researches of Kroenig and Friedrich deal with the response of frog larvae to many types of radiation, and indicate that in fields of equal intensity of ray the biologic action is more intense as the wave shortens, e. g., if three fields are rayed, one with unfiltered x-rays, one with rays through 1 mm. of Cu, one with gamma rays, each field showing equal ray intensity, as measured by the iontoquantimeter, the gamma ray field shows the greatest intensity of biologic reaction, showing more injured larvae.

In practical radiotherapy an economic problem presents itself. In raying superficial conditions light filtration through filters varying from a cardboard,  $\frac{1}{2}$  to 1 mm. Al, up to and not exceeding  $\frac{1}{4}$  mm. Cu, and voltages around 100,000 K. V. can be used, the necessary dose is quickly reached, and fairly efficient treatment kept in the reach of patients whose means are moderate. When my present high voltage apparatus was installed, one  $\frac{1}{4}$  mm. Cu filter was soldered in as a safeguard, but I finally removed it, and now suit filter to condition treated as we all formerly did. The filters when not in place always lie on the control cabinet so they may never be forgotten.

The x-ray is a distinct aid in many benign skin conditions, such as acne, the various eczemas, psoriasis, ringworm, warts, callus, lupus, prurigo, and cancer-promoting conditions.

I believe radiotherapy, local surgery, care of the skin, and general tonic treatment are of about equal value in the treatment of acne. The x-ray, with filtration of 1 mm. Al or  $\frac{1}{4}$  mm. Cu and voltage of 100,000 K. V., has given me fair results. Quartz light, in moderate dosage, seems to me to intensify acne, and intense dosage annoys the patient and attracts unpleasant notice. This point often leads one to choose x-ray in preference to quartz light. Among tonic agents the new endocrine agents, orchitic and ovarian, seem to promise something, especially in patients just above puberty, who tend to relapse, or retain a few lesions. Generally, the x-ray dosage must be pushed close to the erythema point sufficient to exert an atrophic effect on the gland epithelium, but care should be observed in obstinate cases to avoid telangiectasis, hence the necessity of employing all measures that will complete the cure early.

The eczemas require small, broken doses for subacute conditions, e. g., 25 m. a. minutes through 1 mm. Al, and 100,000 K. V. The chronic dry eczemas require larger dosage, 50 to 75 m. a. minutes as above described once a week, and keratotic, senile conditions require close to the erythema dose, 100 to 125 m. a. minutes, or if  $\frac{1}{4}$  mm. Cu is preferred the time may reach double the above. Favorable result is nearly certain without other treatment.

The lesions of psoriasis, as is well known, usually yield readily to radiotherapy, both x-ray and quartz light, but tend to recur, generally as smaller and smaller lesions. As this may go on for years, the danger of telangiectasia must be kept in mind in

relation to the x-ray, which usually clears the lesions more thoroughly with less tanning, but the quartz light is a safeguard and a great aid in protracted cases, and where large areas are involved. I think x-rays should be given through 1 mm. Al. or  $\frac{1}{4}$  mm. Cu, using one-third to one-half erythema dose, repeating in one week, and resting till the lesions recur.

Ringworm, multiple warts or papillomata, callus, lupus, and cancer-promoting conditions usually yield to a slightly suberythema dose, moderate filtration, and 100,000 K. V. Single small lesions are comfortably and economically treated with full strength radium plaque,  $\frac{1}{2}$  mm. brass and layer of unvulcanized rubber, kept in place with adhesive over night, eight to fourteen hours, equaling 40 to 70 mg. hours, according to distance from base of lesion. Small warts and moles can be dealt with quickly and economically by fulguration.

Callus of the plantar surfaces is successfully treated with x-ray or radium, practically without filtration, as the thick skin acts as a filter. A slightly suberythema dose is desirable, or broken dosage may be used to avoid reaction in patients that must remain on their feet. The radium may be worn eight to sixteen hours, preferably while asleep.

Lupus of either variety requires full dosage to mild erythema, and some question its value in lupus erythematosus. If a residue remains or tends to recur after four to six weeks, it must be treated energetically again. Lupus vulgaris is treacherous and prone to recur if treatment has been insufficient.

Cancer-like lesions should have filtered radium,  $\frac{1}{2}$  mm. brass and rubber, supplemented by x-ray over a wider area, including its drainage field, and both treatments should be thorough, for right here lies our chief hope of lessening cancer, as the problem stands today. This requires popular education, and earnest effort on the part of the medical profession to correct abnormalities as early as possible. In the case of pigmented fibrous papillomata, after raying, they may be desiccated by fulguration, causing them to come away as a scab, leaving a negligible scar. Prurigo, perineal and vulval itching, if of the moist type, yield well to the x-ray, but if the skin is dry and atrophic, quartz light and thyroid therapy will probably give better results. Hyperidrosis is much improved or abolished by thorough raying of the axillae, soles of feet, or other affected areas.

The coarser angiomas are best treated with well-filtered x-ray or radium carried to the point of causing the vascular endothelium to react sharply, a mild erythema dose for the surface. The finer types, known as "port-wine" marks, especially in youth, is much improved by quartz light applied with compression, 15 to 30 minutes. This causes vesication and scabbing, and requires two weeks for recovery, and may be repeated safely if the patient's co-operation can be secured. The procedure is safe, and I believe superior to x-ray in the very fine type.

Keloids and hypertrophic scars require high voltage and filtration. Radium is really preferable for small areas, and the treatment must be thorough, to mild reaction. In scars from extensive burn and injury the x-ray relieves sensitive-



ness and increases the patient's comfort, and a reasonable degree of reduction is often secured.

Carbuncle is benefited by moderate filtration and voltage. It has seemed to me that rather full dosage, 50-100 m.a. minutes, 100,000 K. V. is best. The benefit to furunculosis is less apparent, but possibly because we do not use full dosage.

Lymphoid tissue, as in lymphadenitis, enlarged tonsil, or in early Hodgkin's disease states, is susceptible to short wave therapy.

The response of mixed infection or tubercular adenitis is pleasing. If suppuration is pending it is hastened, and a small surgical vent gives recovery with minimum scar formation. But long standing cases with much fibrous and avascular tissue may be better dealt with by surgical removal. Large tonsils often atrophy in surprising fashion if the tissue is lymphoid and vascular, but prognosis must be guarded, especially in the small rough fibrotic type. Surgical removal should not be discouraged in any case ordinarily, but where surgery is feared, or contra-indicated radiotherapy is a resource, possibly quite satisfactory in one-third, fairly so in another one-third, and useless in the remaining one-third of our cases.

Hyperactive and adenomatous thyroids are a suitable field for radiotherapy, as has been ably presented to this body by W. I. Terry. As a guide in this work basal metabolism should be checked from time to time; for this purpose we use the smaller Sanborn apparatus, and make the tests in the office. The patient comes in the early morning without breakfast or marked exertion, and after a half-hour's rest reclining, the tests can be run in another half hour. If the metabolism is plus x-ray treatment is indicated, with caution as broken dosage, using 140-160,000 K. V.  $\frac{1}{2}$  mm. Cu. and 1 mm. Al, 150 m. a. minutes every five days for four doses, then rest and check up in two to three weeks by metabolism test. The above technique is merely a suggestion, to be varied as experience or the type of patient requires. The rapid abatement of nerve symptoms is often grateful to both physician and patient.

Enlarged or persistent thymus, the type causing juvenile asthma and bad operative risk, is very responsive to rather light dosage of x-ray, the voltage and filtration is medium, dosage 50-75 m. a. m. at weekly intervals until relief is positive.

Uterine fibroid, if it has a good vascular supply, can be reduced satisfactorily. I have treated such tumors reaching half way to the umbilicus, and of late larger ones reaching to the umbilicus have been reported. The high voltage ray is efficient; usually 2 fields, rt. and l. lower quadrant suffices, through a port 3 to 4 inches in diameter, 150 m. a. minutes, can be delivered every five days for four treatments using 160-180,000 K. V. full filtration, then rest until the next intermenstrual period and gauge further dosage by size of tumor and amount of last menstruation, warning the patient that menopause may be induced for a time, or possibly permanently, according to age of patient. If children are desired great care must be observed to localize the ray through a small part placed centrally, and remember that secondary radiation will deliver a 15 to 25 per cent dose to the ovary outside the

direct field. I have not observed much discomfort attending this treatment, even the menopause induced appears to be peculiarly free from disagreeable symptoms. If treatment sets up pain, suspect a wrong diagnosis; pus tubes, and ovarian cysts are not suited to radiotherapy.

Uterine flooding, and metrorrhagia, if associated with subinvolution, or the fibroid type of uterus, is controlled permanently by adding x-ray to the other therapeutic measures, and shows at its best by promptly controlling the cases unrelieved by curettage.

Prostatic enlargement in selected cases responds to radiotherapy. Recent inflammatory deposits, and cancer inviting conditions probably are the best indications, and high voltage, full filtration and dosage are necessary.

Certain adverse effects of radiotherapy are to be avoided, or dealt with when unavoidable. These include dryness of the mouth, pharynx and larynx in treating face and cervical conditions, and this will often include altered taste. Dry bronchial cough will result when intensive radiation reaches the lungs. Lessened gastric secretion, nausea, and radiation sickness result when the rays include the upper abdomen. When large skin areas are treated, particularly on patients previously sensitized by x-ray, an unpleasant attack of radiation sickness may occur. The careful operator avoids these consequences when possible, and when unavoidable warns the patient without causing alarm.

It is urged that radiotherapy be given a place with other therapeutic measures in treating non-malignant conditions to which it is suited. It will often justify fully its selection by hastening and rendering more permanent the cure, which is the end we all seek.

## GASTRIC AND DUODENAL ULCER

By JAMES A. MATTISON,\* M. D.

(From the National Soldiers' Home Hospital,  
Los Angeles)

*Not infrequently, patients suffering from abdominal symptoms have been told that they were suffering from gastric or duodenal ulcer, where subsequent careful examinations show that a mistake in diagnosis had been made for tabes dorsalis, cirrhosis of the liver, chronic appendicitis, Banti's disease, tuberculosis of the intestine, or ptosis of the kidney.*

*It is believed that too little consideration has been given to pre-operative and post-operative treatment. In pre-operative treatment, the possible etiological factors have been lost sight of too frequently. It is felt that we cannot emphasize too strongly the importance of an exhaustive search for foci of infection in the body, such as diseased tonsils, abscessed teeth, infected sinuses.*

*DISCUSSION by Charles S. James, Los Angeles; C. P. Thomas, Los Angeles; Carl L. Hoag, San Francisco.*

PEPTIC ULCER is one of the most frequent benign lesions of the upper gastro-intestinal tract. It is of almost equal interest to the surgeon, the physician, the pathologist, and the physiologist.

\*James A. Mattison (Soldiers' Home, Sawtelle, California), M. D. University of Michigan, F. A. C. S. Practice limited to surgery. Hospital connections: Veterans' Hospital, Soldiers' Home. Appointments: Chief surgeon, Veterans' Hospital, Sawtelle; Colonel M. O. R. C. Publications: Several articles in standard medical journals.

It was not until after 1893 that great progress was made by the pioneers in the surgical treatment of this condition.

The etiological factors concerned in the development of peptic ulcers are still more or less muted points. It is generally conceded, however, that an infection which has originated within the body is the prime factor to which is added the lowering of the local resistance to the action of the digestive fluids by means of some chemical or mechanical action.

The duodenal type of ulcer is characterized by a fairly regular group of symptoms, such as a discomfort, varying all the way from an unpleasant sensation, to a gnawing pain in the epigastrium, appearing from a half to three or four hours after meals, associated with gas and sour stomach. A part or all of the symptoms continue until the next meal or until food, liquid, or alkali is taken into the stomach. Food relief, alkali relief, periodicity of attacks, a history of long-standing stomach trouble, and night pains, are quite characteristic of this type of ulcer.

Vomiting is fairly rare in duodenal ulcer, likewise hematemesis and tarry stools. Physical examination in all patients reveals a greater or less degree of tenderness in the region of the right costal margin and extending along the descending portion of the duodenum.

The group of symptoms are repeated with marked uniformity each day for weeks or months, followed by a cessation of symptoms, during which time there is complete or almost complete absence of evidence of the disease. These cycles of attacks and intermission may continue for years. There is, however, usually a gradual increase in the severity with succeeding attacks, and sooner or later adhesions and other complications develop which alter motility and functions and thereby exaggerate the symptoms and modify the characteristic periodicity.

Gastric analysis should be made as a routine measure, but the findings vary so greatly that no definite conclusions can be arrived at from these findings alone. The finding of occult blood serves as confirmatory evidence. Radiological examination, in the hands of a skilled roentgenologist, who follows the routine of careful fluoroscopic examinations supplemented by a large series of plates, is an exceedingly important aid in diagnosis. Of greatest importance in the diagnosis, however, is the history of the case. Its frequency (four times as frequent as gastric ulcer), its latency, delayed pain after meals, and prompt relief following the intake of food, liquids or alkalis, are all important diagnostic points in duodenal ulcer. In making a differential diagnosis the two conditions which are most frequently confused with duodenal and gastric ulcers are chronic appendicitis and disease of the gall-bladder. Here again, an accurate history, including frequency and latency of attacks, relation of pain to meals, food and alkali relief, the type of digestive disturbance after the intake of certain articles of diet, and the radiological findings, will be of prime diagnostic importance.

*Gastric Ulcer*—Is also characterized by periodicity of attacks and definitely localized pain in the epigastrium after meals. The preponderance of gas-

tric ulcer in males is three to one. There is a marked regularity in the time of onset of pain in a given patient. One-half to two hours usually lapses between the intake of food and the pain. As long as no adhesions have formed or no other complications have developed, relief of pain from the intake of food or alkalis is fairly constant, especially where the food is carefully selected and not taken in large quantities. The patient describes the pain as dull or gnawing in character, located in the epigastrium in the midline, or a little to the left of the midline, and often extending through to the back. In gastric ulcer the pain which comes on after meals gradually subsides before the next meal. In duodenal ulcer the pain continues until relieved by food, liquid or alkali.

Vomiting in gastric ulcer is not a frequent symptom. Hematemesis occurs in about 20 per cent of the cases. It must be remembered, however, that hematemesis may result from a number of other causes, such as enlargement of the spleen, in Banti's disease, cirrhosis of the liver, from dilated veins in the esophagus or in the stomach, and from certain toxic conditions resulting from disease of the gall-bladder, appendicitis, and pancreas. Pain and discomfort in gastric ulcer comes on earlier after meals than in duodenal ulcer; does not continue so constantly until the next meal; may let up for a time to begin again before the following meal. Fear of food pain is more often noted in gastric ulcer. Radiological findings are of great corroborative value in supplementing the history and other diagnostic findings. An x-ray diagnosis is possible in 95 per cent of the patients. Gastric ulcer and duodenal ulcer call for both careful fluoroscopic study and a large series of plates, in order to be of greatest value. A careful study of the gastric contents should be made in every instance, even though the findings vary greatly. Deductions must be made from the study of each individual patient.

In arriving at a differential diagnosis, gastric neurosis must be borne in mind. In the latter condition the gastric attacks are more or less independent of the diet. In gastric neurosis there is a noticeable irregularity of intervals between attacks, and certain definite nervous manifestations are usually apparent. In gastric, as in duodenal ulcer, symptoms arising from extra gastric diseases must be kept in mind. Diseases of the gall-bladder, appendix and pancreas frequently give rise to a hypermotility, gastric spasm and pyloric spasm, which produce symptoms closely simulating those of peptic ulcer.

Not infrequently, patients suffering from abdominal symptoms have been told that they were suffering from gastric or duodenal ulcer, where subsequent careful examinations show that a mistake in diagnosis had been made for tabes dorsalis, cirrhosis of the liver, chronic appendicitis, Banti's disease, tuberculosis of the intestine, or ptosis of the kidney.

Treatment of chronic peptic ulcer, where repeated and prolonged medical treatment has failed, is definitely surgical. The subject of surgical treatment of peptic ulcer is one which has received more mature thought than that of any other upper abdominal disease. There have been those who have advo-



cated excision of the ulcer alone. Others who have advocated gastro-enterostomy alone; and still others who have contended that a combination of excision and gastro-enterostomy was the sane and most logical treatment. At the present time the pendulum has swung further toward the radical treatment, including radical resection, followed by an anastomosis of the Polya or Polya-Balfour type. The radical treatment has been particularly widely advocated and practiced on the continent and in Great Britain. The very radical treatment, however, has not met with the same approval in this country, and has not been so widely used. It is universally conceded that gastric or duodenal ulcer requiring surgical treatment should be excised, where practicable, and in the great majority of cases followed by a posterior gastro-enterostomy. The removal of the ulcer-bearing area in gastric ulcer is particularly indicated, especially in the face of the fact that carcinoma is prone to develop in the base or edge of such lesions.

It is believed that too little consideration has been given to pre-operative and post-operative treatment. In pre-operative treatment the possible etiological factors have been lost sight of too frequently. It is felt that we cannot emphasize too strongly the importance of an exhaustive search for foci of infection in the body, such as diseased tonsils, abscessed teeth, infected sinuses. In the past too little attention has been paid to post-operative dietary or therapeutic management. In every instance where operative treatment has been carried out, an intelligent regime of diet should follow, and the patient's habits carefully regulated. In other words, the patient becomes a medical case immediately following surgical treatment.

Balfour summarizes the most important causes of disappointing results from operations, as follows: (1) a young patient; (2) a short and a typical history; (3) the constitutional inferiority type of individual; (4) a small ulcer without obstructive symptoms; (5) development of pathologic conditions, extrinsic to the stomach, giving rise to reflex gastric symptoms; (6) bad habits of living; and (7) unremoved foci of infection.

Imperfect results may also depend on errors of judgment or technique in connection with the operation itself. For example, failure to remove the ulcer when removal is indicated; too short loop to the meso colon; too small an opening or one not properly placed; failure to close the meso colon snugly around the stomach at a sufficient distance from the gastro-enterostomy; twists in the anastomotic loop; and unnecessary trauma during operation.

#### DISCUSSION

CHARLES S. JAMES, M. D. (2007 Wilshire Boulevard, Los Angeles)—It was my good fortune last November to be present at the meeting of the Santa Monica branch of the Los Angeles County Medical Society and to hear Colonel Mattison present the subject of "Gastric and Duodenal Ulcer." This discussion was so comprehensively and accurately in accord with the consensus of modern opinion that there is but little to be added to or taken from it.

Until the etiology of gastric ulcer is more definitely and exhaustively known, our views referable to the treatment and management of this lesion will continue to rest largely upon clinical observation; therefore, this concise

review as presented by Colonel Mattison, with his broad clinical experience, is of particular timely value.

In my opinion, the surgeon too oftentimes minimizes the value of the physician's services in the treatment of gastric ulcer. Every case of gastric ulcer should be individualized and in general viewed primarily as a medical case, with the possibility of there having developed or developing a surgical phase. After the surgical indication has been met, the case should again be viewed as a medical one, and instead of being discharged in a short period of time as cured, should continue under competent medical observation, not for a few weeks or a few months, but for an extended, indefinite period of time.

We must realize that probably none of the present-day gastric operative procedures corrects the underlying etiological factor, or factors, as the case may be.

I am heartily in accord with the essayist's view referable to the pre-operative, operative, and post-operative periods of management, but I think the importance of the post-operative treatment, management, and observation by the physician should be more especially stressed.

C. P. THOMAS, M. D. (Consolidated Building, Los Angeles)—His most excellent paper on gastric and duodenal ulcer is one of the best I have ever read on this subject, and is so complete it leaves but very little to be said in the way of discussion.

I think it is well to take into consideration the condition of the teeth and tonsils, also pyloric spasm due to chronic appendicitis or gall-bladder, as causative factors. Duodenal ulcer pain comes on from one and a half to four hours after food intake, and is generally relieved by milk, alkalis or additional food, while gastric ulcer pain usually comes on immediately after eating and is relieved by vomiting. Gastric analysis, as a means of diagnosis, has usually been disappointing to me. The x-ray sometimes is of diagnostic assistance, but also often very disappointing.

The doctor wisely says that cirrhosis of the liver, chronic appendicitis, gall-bladder disease, etc., are often mistaken for ulcer, and I would add that ulcer of the stomach or duodenum is even more often called gastritis, gastralgia, or neuralgia of the stomach.

Medical treatment of ulcer of the stomach or duodenum should be thoroughly tried when the pain is bearable, the ulcer not actually bleeding or when its healing has caused stenosis, but when either of those conditions are present the best results will be obtained from properly executed surgery.

Radical removal of non-malignant ulcer, in the hands of our very best surgeons, is still a dangerous procedure and certainly not one to be generally advised. The cautious treatment, when the ulcer can be approached, is safer, just as efficient, and is a better means of preventing malignancy.

Gastro-enterostomy is still a pretty definitely mechanical problem, but when it is correctly done is still the safest and best treatment and about the only one when the ulcer has been sufficiently near the pylorus to disturb its proper function. I am quite convinced that those surgeons who are severe in their criticism of this operation are so because of their inability to do it properly.

CARL HOAG, M. D. (177 Post Street, San Francisco)—This concise and well-thought-out paper leaves little to be added.

I agree with the author that the history and the laboratory and the screen findings give us the most important factors in establishing a diagnosis. Little is learned by the analysis of the contents of the stomach; in fact, so little that it is hardly advisable to subject the patient to this ordeal, except in selected cases. The x-ray gives us the information we wish with much less discomfort.

Medical treatment, which usually comprises some form of Sippy diet, is, in itself, an important diagnostic measure, for those patients who are not relieved usually are found later to have some complicating lesion or else no ulcer at all.

Just as we must individualize our patients in recommending an operation, so it is essential to choose the proper operative procedure when the abdomen is open.

Gastro-enterostomy gives excellent results where ob-

struction is present, and it does it with a lower mortality rate than with any other type of operation which could be employed. Unfortunately, it alone does not cure large, acute, bleeding ulcers. The simplest method of destroying an ulcer is with the Balfour cautery. This is a less formidable operation and gives less distortion than excision. I think that this procedure still has a well-earned place in our surgery of the stomach and duodenum, in spite of the recent tendency toward excision with some type of pyloroplasty. The advantage of the latter procedure lies chiefly in retaining the normal movements of the stomach contents through the duodenum where they are modified before coming in contact with the jejunum. It enables us also to explore the inner surface of the duodenum.

My own experience leads me to favor the Finney operation, because it results in a better reconstruction and it gives a better function than any other type of pyloroplasty.

I am in accord with the author's views, that the Billroth and Mayo-Polya operations should only be done in carefully selected cases, usually as a secondary procedure, because of the increased mortality rate even in the hands of the best surgeons.

I am glad that the author emphasizes the post-operative care, for however excellent the operative treatment, all of these patients have a damaged gastro-intestinal mechanism, and they should be supervised for a long period of time.

DOCTOR MATTISON (closing)—The question of whether or not an excision of either a gastric or duodenal ulcer is advisable can only be determined after the abdomen is opened and the conditions present determined. It frequently happens that there is a definite indication for the excision where it is impossible to excise the ulcer because of complications which have arisen, such as dense adhesions to the pancreas, where an attempt at excision of the ulcer would unnecessarily increase the risk to life out of proportion to the benefits derived.

Clinical results following gastro-enterostomy, especially in the case of duodenal ulcer, have been so universally satisfactory that it is not believed that a radical excision of the pyloric end of the stomach is justified as a routine, especially in the face of the fact that the more conservative operation, posterior gastro-enterostomy, has given very satisfactory results in approximately 90 per cent of all cases. Clinical experience has also shown that there is a recurrence of the ulcer, usually in the form of a gastro-jejunal ulcer, requiring subsequent surgical treatment in approximately 2 per cent of all cases of gastro-enterostomy. In such cases, however, the indication, generally, is to cut off the gastro-enterostomy, do a resection of the pyloric end of the stomach, which includes the acid-bearing cells of the stomach, and do an end-to-side gastro-enterostomy.

In cases of crater ulcer, in the lesser curvature of the stomach, gastro-enterostomy has been very unsatisfactory, and clinical experience has shown that it is in this type of gastric ulcer that the radical operation of resection of the pyloric end of the stomach is more frequently indicated.

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What is meant by adult-infantism? The condition and conduct of an individual who, having reached maturity of physical development, remains infantile in his responses to the demands and obligations of life. One may be infantile on the physical, the intellectual, or on the affective side, but the term ordinarily is limited to lack of development in the field of the emotions.—Joseph Collins (Harper's).

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To a friend just married, Abraham Lincoln wrote: "My old father used to have a saying that if you make a bad bargain, hug it all the tighter; and it occurs to me that if the bargain you have just closed can possibly be called a bad one, it is certainly the most pleasant one for applying that maxim to which my fancy can by any effort picture."

## SIGNIFICANCE OF GROWTH DEVIATIONS IN CHILDREN

By C. L. LOWMAN,\* M. D., Los Angeles

*It is important to recognize that certain faults in children of a certain type may lead to certain disturbances of function and pathological changes at a later date.*

*It is only by projecting our minds ahead twenty years or so to the decade when the body mechanism meets the crisis of life that we can fully appreciate that simple potted ankle and imperfectly forming arch of the child may result in fatigue, cramps and sciatic neuritis of a later period.*

*Let us look well into the future, then, when we address our efforts to the care of skeletal faults in children.*

DISCUSSION by Guy L. Bliss, Long Beach; Clifford Sweet, Oakland; Robert Ewart Ramsay, Pasadena.

TO appreciate the true significance of growth divergencies in children it is quite essential to have in mind two things, namely: First, whether any given deviation is due to actual pathological causes, or is a pure growth fault with associated functional disorder; and secondly, the factors related to the type of individual and the correlative tendencies and characteristics involved.

In order to accomplish victories similar to those over diphtheria and scarlet fever in the line of improving a child's future physical possibilities, one must approach the matter as much as possible from an anthropological viewpoint, rather than a pathological. Physicians are trained so much to observe the unusual in their study of the human body that they are not sufficiently familiar with the physiological differences and peculiarities of the several different types of the ordinary average individuals whose disturbances of health rarely lead them to require a physician's attention.

It is important to recognize that certain faults in children of a certain type may lead to certain disturbances of function and pathological changes at a later date. For instance, a certain type of fat child with knock-knees, lordosis and flat-feet is so definitely classified anthropologically that the child's future life will, very probably, be influenced by certain prominent endocrine disturbances and definite mental and physical characteristics.

So true is this that the physician can predict with reasonable certainty what general diseases and disturbances of metabolism are likely to take place and with this knowledge he can take appropriate steps toward prevention.

The physician sees a stream of patients with arthritic, neuritic, bursitic and myositic symptoms related very definitely to faults in skeletal alignment and the incident physical overload of the muscular and neural systems. Round shoulders, spinal kyphosis, flat chest and relaxed abdomen, picture to us at once, not only a neuro-muscular overload, but the slackened diaphragm, narrowed chest depth and visceroptosis, incident to them, and point as well to organic in-

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\*Charles LeRoy Lowman (2417 S. Hope Street, Los Angeles), M. D. University of California (Southern Branch), 1907. Practice limited to Orthopedic Surgery. Hospital connections: Orthopedic Hospital School. Appointments: Chief of staff, Orthopedic Hospital; Lecturer on Corrective Physical Education, University of Southern California and Pomona College. Publications: Numerous since 1915, including discourses are: Deflection of Energy, Applied Anthropology, Use and Abuse of Arch Supporters, Delayed Development of the Tarsus, A Study in Gaits, etc.



efficiency and inferiority, which ought to constitute clinical entity. When we learn to appreciate the fact that foot and leg strain may be evidenced only by nervousness and fatigue, or backache, or that upper back pain, shoulder girdle neuritis and muscle tension may mean chiefly eye strain, then we can begin to appreciate what the term "postural strain" connotes.

It is my purpose in this paper to point out some of the facts which show that the recognition and correction of static faults in early childhood is one of the finest applications of preventive medicine and surgery.

The classification of body types and a recognition of characteristic postural deviations of each type is of basic importance. The commonest faults, and the ones most frequently overlooked, are the most important from a standpoint of the future organic health of the individual. Deviations in the anterior posterior plane, such as the usual fatigue slump, are of more vital significance than some severe grades of lateral asymmetry. Round shoulders, kyphosis and lordosis, flat chest, lowered abdomen, anterior tilt of the pelvis, and forward position of head constitute the first group.

Because of the energy loss from neuro-muscular fatigue, faulty skeletal alignment of legs and feet, makes up another group of faults next in importance and in fact practically always existing in some form with the above mentioned trunk deviations. Knock-knee, bowlegs, back-knee and rotations with pronated ankles and various degrees of arch depression constitute this group.

When any of these conditions are present in a small child, one is prone to minimize the importance of their consideration, because they are not usually accompanied by definite pathology or symptoms.

It is only by projecting our minds ahead twenty years or so to the decade when the body mechanism meets the crisis of life that we can fully appreciate that simple pronated ankle and imperfectly forming arch of the child may result in fatigue, cramps and sciatic neuritis of a later period. Consequently, we must visualize in the shoulder girdle and neck region potential cervico-dorsal neuritis, subscapular or sub-acromial bursitis, myositis and eye strain (as we recognize it in relation to concentrated hand and eye work) occurring possibly from drooped and rounded shoulders, cervico-dorsal kyphosis or flexed scapulae in the adult.

The spinal relaxation with droop shoulder and round back will mean sagging of cervical fascia and relaxation of diaphragm with its decreased pumping capacity, lessening oxygen intake and venous return. Alteration of thoracic shape means decreased ventilation and further cardio-vascular embarrassment.

The incident visceroptosis may mean future right-sided congestion, colitis, constipation, gall-bladder and appendix trouble and general intestinal stasis, which ultimately becomes the focal point of toxin distribution.

In viewing the lordotic, hollow back child with tilted pelvis, one should have visions of sacro-lumbar and sacro-iliac disturbances, resulting in so-called "sciatica," and the incident disability, disorders of pelvic viscera, and disturbances in child-bearing.

The dysfunctions of foot and leg structure ought to be read in terms of arthritis, neuritis and vaso motor conditions, of mid-adult life, with their sequelae of pain and disability so common in a very high percentage of individuals between thirty and fifty.

The long, flat chest with marked Harrison's sulcus must be appreciated in terms of lowered metabolism and future possibility of pulmonary infections prone to occur in certain types, when these potential postural faults affect the respiratory function.

The early appearance of abdominal and iliac fat pads with hollow back, knock-knees and flat-feet should make us alert to detect the early endocrine dysfunctions which announces faulty calcium metabolism and imperfect oxidation which later end result might be coxa vara, obesity or low back difficulties.

Considering the fact that fully 80 per cent of adult patients presenting foot and leg symptoms have some fault in leg alignment, we can readily see why it is important to at least stop telling mothers that children "will outgrow" these defects, because only under careful treatment, or exceptionally favorable conditions, will such a thing occur. Let us look well into the future, then, when we address our efforts to the care of skeletal faults in children.

#### DISCUSSION

GUY L. BLISS, M. D., (1209 Pine Avenue, Long Beach)  
—Originally medical science dealt almost exclusively with the relief of disease. The study of pathology was one of the chief requirements in a medical school. At the present time medicine has developed within its fold a new department called prophylactic or preventive medicine, which has proved to be a child that has outstripped its parent. This is especially well illustrated in the departments of pediatrics and orthopedics.

Pathology is one of our major studies in medical schools and rightly so. We believe that the time has come when a study from the anthropological viewpoint is of equal importance. Ontogeny repeats phylogeny. History reveals that our common ancestors traveled about on four legs instead of in the upright position. In the gradual evolution of primates in which there was a change from the prone to the upright position, it seems to have been possible for faults to appear in the growth development.

With medicine developed to the fine degree that it enjoys, we are preserving the lives, not only of the fit but of the unfit, and permitting them to reproduce their own kind. Is it not possible that this both increases and exaggerates faulty development, the end result of which may be pathological conditions?

Physicians should know more about orthopedics. Our education should include not simply the mal-development found in babies and young children, but they should include orthopedics as found in adults. This will impress upon us that many of the pathological conditions with which adults are suffering are due directly to faulty development in infancy and childhood.

How easy it has been for us in the past to allay the anxiety of the mother by patting her on the shoulder and assuring her that her baby's extremely bowed legs are normal. That the flat-feet will be outgrown. That the narrow chest and stooped shoulders will take care of themselves. After reading this discourse of Lowman's, I am sure that many of us are being chided by an outraged conscience. Lowman has mentioned briefly the various classes showing a faulty development. One thing that has aroused my curiosity is the frequency with which we find an assembly of several of these mal-developments in the same child. We wonder if there is not a bad inherit-

ance in that family which brings about so much mal-development in one child. Frequently we see in a child 16 years of age a marked fatigue slump, round shoulders, lordosis, flat chest, marked visceroptosis, tilting of the pelvis, extreme knock-knees and flat-feet. Such a picture constitutes one of the most pitiable debacles of childhood. When such a child reaches the age in which it encounters the stress of commercial anxiety it is sure to crack under the strain.

Lowman has given a sane, sensible, scientific presentation of a subject of paramount importance to all physicians. His message should be brought to the attention of the medical profession as a whole, in order that it may be more alert to sense present and remedy the potential difficulties inherent in the mal-development of childhood.

CLIFFORD SWEET, M. D. (242 Moss Avenue, Oakland)—Doctor Lowman does well to call our attention again to the importance of correcting defective posture during the active growth period of life. During this period, growth is a most efficient ally, since "growth always follows the direction of use."

Freely admitting that most postural defects are fundamentally congenital in origin, we can so modify them by directing growth that much of the burden of carrying them through life can be removed. For example, pronation and eversion of the feet is very common in young children, most commonly accompanied by a greater or less degree of knock-knee, and at times also by bow-legs. Elevation of the inner border of the heels with advancement of the inner border of the heels if eversion is pronounced, and the wearing of a heel if the calf group is weak, will help greatly in bringing about functionally efficient feet and legs.

More than one-half of all the runabout children who come into our office are in shoes that are too short. Anyone standing in shoes too short for his feet pronates and everts them in order to remove the thrust of his weight from his toes. In time this deformity becomes permanent in the growing child because of his short shoes no matter how perfect his heredity equipment may have been. In this connection we should make the following points clear:

1. No child under 7 years of age can be trusted to make complaint of short shoes.
2. The shoe should be fitted standing, with the full weight borne on the feet; while sitting the foot is relaxed. Both mother and shoe clerk must be taught this. In the weight-bearing position, the hinge of the shoe and the hinge of the foot should coincide.
3. Without regard to style, no shoe is acceptable which has other than a straight inner border. The great toe must not be crowded laterally, thereby removing it from its ability to support the longitudinal arch and prevent undue pronation.
4. Short socks produce almost as much deformity as short shoes.
5. The child's foot grows very rapidly and shoes must be inspected frequently and discarded promptly when too small.

ROBERT EWART RAMSAY, M. D. (65 North Madison Avenue, Pasadena)—This discussion of growth deviations in children is a valuable contribution. The orthopedist recognizes and treats many abnormalities which he can trace back to faulty diet, faulty bodily posture and faulty hygiene during childhood. Doctor Lowman's exposition strengthens my own feeling that the most valuable thing the physician can do is to recognize in the child deviations from the normal which are not only of pressing importance at the time, but full of potential difficulty for the future. The physician who recognizes rickets in its incipency is not only caring for the present health of the child but also doing his part in preventing deformity, weakness and inefficiency in the adult. The evil effects of poor posture are not only present but future, and the testimony of Lowman is eloquent in pointing this out. The study of the interaction of the glands of internal secretion is destined to yield fruitful results in the same direction. Particular attention to the diet of children, especially as regards vitamin deficiency, is most important from the same point of view. Lowman encourages us to project into the future the deviations of today and to strive for

the correction of what may, to many persons, seem trifling matters for so much enthusiasm.

Physicians are learning to take counsel with orthopedists. Both have much to gain from co-operation. The child is the beneficiary. Together they may show the value of looking back from adult deformities to childhood abnormalities and forward from slight deviations in children to impairment and distress in after life.

DOCTOR LOWMAN (closing)—Doctor Bliss' comment in reference to the value of applied anthropology is very appropriate, because a knowledge of body types and their variations is quite essential in considering potential deviations in children.

In regard to Dr. Sweet's observation of children being fitted with too short shoes, I should like to say that, due to the fact that about 80 per cent of children's feet are pronated and have more or less relaxation of arches, the fact really is, that the feet are too long for the shoes rather than vice versa. When the weight is borne on the inner border of the foot and the ligaments relax, the foot is thrust forward in weight-bearing and may be anywhere from a quarter to three-quarters of an inch too long. If the shoe clerk fits the shoe correctly in the non-weight-bearing position the shoe will naturally be too short unless tilted to the outer border when weight is put on the foot and, as he states, to relieve this stress the child will begin to toe out. On the other hand in the weight-bearing position if the arches are depressed the metatarsal phalangeal joints will be thrust forward of their normal line, and then if the shoeman fits this position, putting the point of contact on the hinge of the shoe in relation to this joint, the shoe will be so long that it will allow the foot to relax to a further degree. Consequently, the only satisfactory thing to do, particularly before 7 years of age, is to raise the inner border of the heel from one-eighth to one-quarter of an inch to keep the weight on the outer border of the foot. An eighth-inch correction could be readily carried by 95 per cent of the children, at least up to eight or nine years of age, with beneficial results.

In conclusion, the most important thing to remember is that the foot reaches its mature shape at 7 years of age, except in abnormal conditions, hence, the pediatrician, who sees more of these children than any other medical man, should be on the alert to appreciate that in accordance with Wolf's Law, a very high average of these children will become abnormally developed by faulty weight-bearing unless they receive the attention of men most interested in the physical welfare of children.

## 1926 ANNUAL SESSION CALIFORNIA MEDICAL ASSOCIATION

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## SKIN LESIONS AS DIAGNOSTIC AIDS IN GENERAL MEDICINE

By H. J. TEMPLETON,\* M. D., Oakland

*Many dermatoses are symptoms of, or are associated with, systematic or visceral disease. A knowledge of this inter-relationship will frequently help the physician in solving a diagnostic puzzle. Dermatologists should be thoroughly grounded in internal medicine in order that they may be of utmost co-operative aid in the study of such cases.*

DERMATOLOGY is often looked upon by the general practitioner as a specialty, the aid of those who practice, which is to be invoked only when he is confronted with some obscure or intractable skin manifestation. This attitude is somewhat of a heritage from the days when dermatologists were externists rather than internists; when they saw only the abnormal skin rather than the diagnostic problem often lying deeply under it. Fortunately, those days are gone, and the dermatologist of today is a highly specialized student of medicine who, in addition to special knowledge of the skin, utilizes all the modern diagnostic aids of the internist in studying his patients. He is frequently able to help those who limit their work to internal medicine in diagnosing obscure conditions by noting cutaneous changes which may be more or less pathognomonic. It is this phase of diagnosis only that I propose to discuss.

Among the diseases which are diagnosed chiefly by their cutaneous manifestations, the acute exanthemata take first rank. Here the eruption is generally clearly diagnostic. But there are many patients in whom the rash is atypical and difficult to differentiate from other exanthems such as scarlet fever and rubella; or between an exanthem on the one hand and a dermatosis on the other as between scarlet fever and erythema scarlatinoides. It is in these aberrant, unusual manifestations that the dermatologist should be useful in consultation, assuming, of course, that everyone who practices this specialty should be thoroughly trained in the recognition of these acute eruptive fevers. Nearly all of the diseases belonging to the infectious granuloma group may be diagnosed by their skin lesions. Among these are leprosy, anthrax, glanders, blastomycosis and actinomycosis.

Next in the frequency with which the dermatologic picture determines the diagnosis comes syphilis. There is no disease more generalized, no disease which invades all the special fields of medicine as it does. A very high percentage of cases of syphilis are diagnosed by the lesions visible upon the surface in the primary, secondary, or tertiary stages. Many times patients seek advice because of a skin eruption which to them is the only symptom of what the physician readily recognizes as syphilis. Here especially, a knowledge of the skin lesions of syphilis is of the utmost value, for although most syphiloderms are characteristic, many of them are great imitators

and are only with difficulty differentiated from various simple dermatoses. An eruption of the palms or soles, seemingly eczematous, may occur years after the forgotten chancre and be the signpost to a proper diagnosis. A diffuse pigmented mottling of the neck in a young woman may disclose the presence of unsuspected syphilis of a few months before. Likewise luekoplakia, irregular moth-eaten baldness, spoon-shaped concave fingernails, soft, pliable tibial, clavicular, or frontal scars, may be relics of an old syphilitic infection.

Systemic tuberculosis sometimes exists unsuspected until some skin lesion crops up to put the investigator on the right track. Lupus vulgaris, t. b. cutis orificialis, t. b. verrucosa cutis, and a few others are true infections of the skin by the tubercle bacillus and generally indicate either a present active, or an old quiescent, tuberculosis elsewhere. Other skin conditions which have not been definitely shown to contain tubercle bacilli, but which are thought to be due to a cutaneous reaction to their toxins, are known as the tuberculides. These include the papulo-necrotic tuberculid group, lichen scrofulosorum, erythema induratum and sarcoids. The existence of any of them frequently leads to the discovery of tuberculous foci elsewhere in the body. According to Roth, about 74 per cent of the cases of lupus erythematosus are associated with visceral tuberculosis, although other investigators believe that most cases indicate merely some focus of infection, tuberculous or otherwise.

Many of the common rashes, such as erythema multiforme, erythema nodosum, urticaria, eczema and others, may be symptoms of internal disease. Erythema multiforme is very frequently an indication of infection about the teeth, tonsils, sinuses. Erythema nodosum occasionally is a surface manifestation of arthritis-endocarditis syndrome. Urticaria likewise may be a symptom of focal infection, although it is probably still more often a sensitization phenomenon. I recall a patient in whom the occurrence of urticarial wheals was of utmost aid in diagnosis. A young boy was seized with severe right iliac pain associated with vomiting. Acute appendicitis was feared and operation considered. Fortunately, the appearance of giant urticarial lesions revealed the true nature of the trouble as urticaria associated with gastro-intestinal symptoms. Papular urticaria in children may be a symptom of malnutrition or of intestinal parasites. Chronic urticaria is often due to syphilis and should cause a Wassermann test to be done. When confronted with an edema of the glottis or larynx, one should consider the possibility of it being an angioneurotic edema. If similar lesions or urticaria are found on the skin the diagnosis is confirmed.

Eczema is probably more often of internal than of external origin. It may point the way to the discovery of alimentary disorders, glandular dyscrasia, sensitization to various proteins or abnormal blood changes. Eczema of the ear in childhood may be due to the discharge from an unsuspected chronic otitis media. Eczema of the nipple of over three months' duration should make one think of the possibility of Paget's disease. A dry scaly, ecze-

\* H. J. Templeton (3115 Webster Street, Oakland), M. D. Ohio State University, 1917. Graduate School of Medicine, University of Pennsylvania, 1924-25. Appointments: Dermatologist, U. of C. Infirmary; Clinical Instructor in Dermatology, Stanford Medical School. Publications: "Hay-fever, Intermountain District" (Calif. and Western Med., June, 1924). Practice limited to Dermatology and Syphilology.

matous eruption associated with severe itching may be the earliest sign of a leukemia.

In a very high percentage of patients, the first subjective symptoms of diabetes mellitus are referable to the skin. On account of the increased blood sugar concentration, the skin itself contains an excessive amount of dextrose. This makes it an excellent culture media upon which pathogenic cocci multiply and flourish. As a result, recurrent crops of skin lesions may become terribly infected. These pyodermas are seen so frequently as an early symptom of diabetes that urinalyses and blood sugar examinations should be done in all patients resistant to ordinary treatment. Other dermatoses which make one think of diabetes, but which are not characteristic, are gangrenes, pruritus (especially of the vulva or scrotum), and purpuras.

Pruritus, general or localized, is a symptom often not taken seriously, but one which may have great diagnostic possibilities. Localized pruritus of the scrotum, or vulva, and its important bearing on diabetes, has been mentioned above. Pruritus ani, besides indicating local pathologic changes such as hemorrhoids, fissures, polyps or pinworms, sometimes denotes abdominal or pelvic abnormalities. Montague has recently pointed this out and explained it on the grounds of noxious nerve stimuli coming into a spinal segment from diseased viscera and being referred out from this segment over the nerves to the perineum. Thus, in his excellent article, he has mentioned pruritus ani as being a symptom of prostatitis, vesiculitis, oophoritis, appendicitis, cholecystitis and other abdominal and pelvic inflammations. So no examinations of one of these patients is complete without a careful study of the abdominal and pelvic organs besides the usual rectal examination. Pruritus occurs in many pathologic conditions involving the gall-bladder, especially those in which there is biliary retention. It may precede the jaundice and hence may be of great aid in early diagnosis. In Hodgkin's disease, also, it may be the first symptom, the only one of which the patient complains. Likewise the leukemias early in their course may involve the skin and produce intense itching. A very few cases of nephritis have pruritus as their chief complaint.

Purpura is always an expression of some general disturbance and frequently highly diagnostic. It is of value in helping to diagnose sepsis, cerebrospinal meningitis, malignant endocarditis and typhus. Infrequently it may be a prodrome of, and precede by a day or two, the typical rashes of variola or scarlatina.

Pellagra is another systemic disease often diagnosed by its dermatologic picture, that of a dermatitis of the dorsum of the hands and wrists and of the face.

Nodules and infiltrations in the skin may be but surface indications of leukemias, sarcoma or carcinoma. I remember a young girl in whom the very first sign of a generalized carcinomatosis was the sudden appearance of numerous BB-shot-sized nodules deep in the skin. While mentioning malignancies, we should speak of that rare blackish pigmentation of the neck, axillae and perineum accompanied by papillary hypertrophy and known as

acanthosis nigricans. Although this is always a dermatologic manifestation at first, it almost invariably indicates abdominal malignancy. Hazen feels so positive of this that he advises exploratory laparotomy in all of these patients.

Even the pilosebaceous system may yield helpful information in obscure cases. The irregular moth-eaten alopecia leueticus is well known. Alopecia areata is generally indicative of nervous derangements. As an aid to retrospective diagnosis, loss of hair may point back to some acute febrile attack of several months before. Schamberg believes that when a woman, particularly, suffers diffuse loss of hair, some systemic factor is at fault and should be carefully searched for. Acne, seborrhea and hypertrichosis sometimes indicate disturbances of the sex glands. Excessive dryness of the skin occurs with hypothyroidism and conversely, hyperthyroidism is suggested by a skin which is abnormally moist. The rounded clubbed finger nails which make us think of chronic heart disease, pulmonary suppuration or tuberculosis, are well known. A peculiar spoon-shaped concavity of the nails has been described as a sign of syphilis.

Perforating ulcer of the foot, malperforans, invariably has some remote cause. Its occurrence frequently puts us on the track of tabes dorsalis. Less frequently it means peripheral neuritis or leprosy.

Pigmentations of the skin are frequently systemic in origin and call for a complete physical examination. They may lead to the discovery of Addison's disease or other diseases of the adrenals. Likewise, they may be symptoms of abdominal malignancy (see acanthosis nigricans above), bronze diabetes, chronic silver or arsenical poisoning.

## VIRULENT SURGICAL INFECTIONS

By WILLIAM H. BARNES,\* M. D., *Oakland, California*

(From the University of California Infirmary)

*The most important factors in severe pyogenic infections call for: (1) expeditiousness in diagnosis; (2) ability to foresee its possibility of invasion; (3) quick understanding of the patient's needs in his fight for life.*

DISCUSSION by C. A. Dukes, *Oakland*; C. E. Phillips, *Los Angeles*; Edwin I. Bartlett, *San Francisco*.

PROBABLY no problem in the healing art gives greater concern to both the doctor and his patient than an infection which has broken through its local bounds and is advancing by way of the lymph or blood stream. The surgeon well knows when his patient, who has an acute localized infection, suddenly has a rapid rise in temperature, a sudden chill, with a sudden increase in leucocytes of the polymorphonuclear type, that there is generally apt to be trouble ahead and he stands aghast wondering what to do for no routine can be followed here. He is likewise alarmed when suddenly from a small

\*William H. Barnes (230 Grand Avenue, Oakland, California), M. D. University of California. Practice limited to General Surgery. Hospital connections: University of California Infirmary, Berkeley; Merritt Hospital, Oakland. Publications: Classification Streptococci, Co-relating Action of Fermentation and Precipitation Tests, etc. (Jour. Infectious Dis.); Activity of Staphylococci in Milk (Berkeley Sec. Jour. Infec. Dis.).



infected wound there are a number of red lines extending from the infected area.

A series of three cases, whose demise was due to a fatal involvement of either the blood stream or the lymphatics will, to some degree, illustrate the subject.

**CASE No. 1—Male.** Age 28. Occupation, minister. *Family History*—Healthy as a child except for the usual children's diseases, with no complications. Married. Wife now has diphtheria. One child age one year, generally healthy except that at present has an acute respiratory infection, now diphtheritic. Father and child had recently been given diphtheria antitoxin for prophylaxes. *Past History*—Negative. *Present Illness*—Three days ago, April 4, 1924, patient sustained a slight transverse laceration over the first joint of the anterior surface of the left thumb. No particular attention was paid to it until April 7, when it began to be painful. *Physical Examination*—Moderately well nourished young man of about thirty. Eyes, ears, nose, negative. Mouth and pharynx clear. Tonsils negative. Tongue clear. Neck: No pulsation, no glandular enlargement. Chest: Well developed. Lungs: Good expansion, resonant throughout, no rales. Heart: No enlargement, all sounds distinct, no murmurs. Blood-pressure 122/76. Rate 76. Abdomen normal, no pulsation, no masses felt. Liver, spleen, kidneys not palpable. Extremities: No deformities, no scars, except a small transverse laceration near the first joint of the thumb, slightly swollen and inflamed. Knee jerks present. Temperature 98.6° F.

The wound was opened and treated with local applications of 10 per cent mercurochrome, dressed and compressed with hot boracic acid every two hours during the day. He was instructed to keep the hand very quiet and not use it. The thumb continued to improve until four days later when, in handling his 1-year-old baby who had a severe respiratory infection, he bumped his injury twice during the day and the baby got a hold of it and pulled it, causing considerable pain. He carelessly used the thumb in doing the baby's washing, because the mother at this time was isolated with diphtheria. The following day the thumb was considerably swollen, pus had formed along the line of the wound. This was incised, pus expressed and dressed similar to the above procedure with again instructions to keep the hand absolutely at rest, but again the patient disobeyed, went out and drove an automobile ten or fifteen miles, using the hand in the steering of the machine. The following day the swelling had advanced to the thenar eminence with a couple of lymphangitic streaks extending to the shoulder. Temperature 102°. As the hand continued to swell the patient was taken to the hospital during the afternoon and the incision lengthened to the thenar eminence, but there was very little pus. The hand and arm were placed in a continuous alkaline bath. The swelling increased and extended to the shoulder and on April 17 incisions were made in the forearm, but no pus was found except a slight amount following the nerves and bloodvessels lying anterior to the interosseus membrane, well up toward the elbow.

On April 18 the patient was in a semi-stuporous condition, edema was increased in the shoulder and had extended over the left side of the thorax to the waistline. Cultures from the pus in the thumb showed a hemolytic staphylococcus, a non-hemolytic streptococcus and a green pigment producing bacillus, one of the liquefaciens type, all of which were pathogenic for rabbits. Antistreptococcus serum was administered but caused an anaphylactic shock even after the regular desensitizing procedure had been performed. 20 c. c. of 1 per cent solution of mercurochrome were given intravenously. Temperature 104°. White blood cells 47,000; 92 per cent polymorphonuclears. April 19, 1924. Ten c. c. of 1 per cent mercurochrome were given intravenously, 35 c. c. of antistreptococcus serum were also given intravenously, followed by another anaphylactic shock. The forearm had become gangrenous.

April 20. The condition still remained serious. Again 7 c. c. of a 1 per cent solution of mercurochrome were administered intravenously. Already there had been considerable blood destruction, the hemoglobin being now

down to 50 per cent. A transfusion of 500 c. c. of citrated blood was given. The white blood count was 34,600. Pm. 89. The temperature ranged from 101 to 103 rectally. April 21. His condition was better. The edema of the arm, shoulder and side of the thorax had decreased considerably. On account of the gangrenous condition of the forearm it was decided to amputate the arm at the junction of the upper and middle third of the humerus. April 22. The patient continued to improve. The white blood count had dropped to 18,000. Pm. 83 per cent. The temperature was 102.8 rectally. Blood cultures showed hemolytic staphylococcus aureus. For a time the patient continued to show improvement. The arm stump healed rapidly; the appetite improved until May 8 when suddenly there was a rise in temperature to 103° F. and he became irrational. The white blood count jumped to 36,000, Pm. 94 per cent, hemoglobin 41 per cent. The patient was then given another transfusion of blood, 500 c. c. and 300 mg. of gentian violet. May 11. 200 mg. of gentian violet. May 14, 200 mg. of gentian violet with considerable cessation of symptoms. Temperature 101° to 103°. White count 14,000, Pm. 82. Appetite fair. He complained of considerable pain in the left hip on flexion of the femur, but no swelling and no tenderness on pressure could be found. During the next ten days there was very little change, appetite fair, temperature 101° to 103° rectally. White blood count 14,000 to 16,000. Pain in the left hip on motion of the femur continued to grow worse.

May 24 a slight swelling appeared in the left flank, the foot was swollen but not painful to motion nor pressure. There was considerable pain on flexing the femur at the hip and a diagnosis of a psoas abscess was definitely made.

Urine examinations continued to show a slight amount of pus and albumin. Casts (hyaline) appeared after the mercurochrome injections and lasted for a period of ten days. There was good elimination with a wide range of specific gravity. Medication consisted in Fowler's solution, digifoline, adalin and luminal and morphine sulphate, besides those already mentioned. May 30 a cystoscopic examination was made and both kidneys were found to be functioning normally. On May 31 the lumbar abscess was drained. It extended from the diaphragm to the inguinal ligament and contained about a pint of serosanguinous pus. His condition remained poor. On June 4 an abscess ruptured into the rectum and much pus was expelled. June 5 the skin of both feet and knees showed many hemorrhagic foci. These were tender and later turned black. June 7 the patient passed away.

The autopsy showed a small septic infarct in the lower lobe of the right lung. The left lung was negative. The heart was negative; spleen slightly enlarged, liver slight passive congestion.

There were quite a number of cicatrized macroscopic areas (apparently healed lesions) in both kidneys, but no acute inflammatory macroscopic areas to be seen. Lateral to the left kidney there was a fairly well walled off area (this area had been drained originally) containing pus extending from the diaphragm caudal underneath the inguinal ligament to end around the rectum. Blood cultures were frequently taken. Only one was positive and that for staphylococcus aureus. Cultures from the psoas abscess showed streptococcus of a nonhemolytic nature. All cultures were pathological for rabbits.

**CASE No. 2—April 23, 1924.** A young woman, University student, age 22, had been having a number of furuncles for which local treatment had been given. The family and past history were negative. *Physical Examination*—Moderately well nourished, well developed young woman; eyes, ears, nose negative. Mouth, pharynx clear. Lower lip had a small inflamed furuncle about one c. m. in diameter. The face was slightly flushed. Neck: No pulsation, slight glandular enlargement. Chest: Fair development; lungs normal. Heart not enlarged, sounds normal, rate 90. Abdomen normal. Extremities normal. Knee jerk present. Temperature 102.8° F. She was admitted to the Infirmary and the lip compressed with hot boracic acid. The swelling increased with a feeling of malaise. The following day the infected area was incised under ether anesthesia and much pus expressed. Her temperature was 103.2, her white blood count was

18,540 with 87 per cent polymorphonuclears. The urine showed a heavy trace of albumin with many red blood cells and an occasional white blood cell. The following day the swelling had increased until it had involved the chin and was extending over the neck. Her temperature was 104.4. White blood count 19,600. She was very restless and talked irrationally. At times she complained of feeling exhausted. A menstrual period had begun.

April 26. The edema had continued to increase, involving the neck to the clavicles. The temperature was 104.6. The whole lip was infiltrated with pus, drainage was profuse. An intravenous injection of 8 mg. per kilo. of gentian violet was administered. There was no decrease in pulse nor temperature until the following day when the pulse had increased and the temperature was decreasing. Blood cultures showed a profuse growth of staphylococcus aureus strongly hemolytic. Another intravenous injection of gentian violet at 12:45 p. m. was given. The patient expired at 8 p. m. There was no autopsy.

CASE NO. 3—May 30, 1924, a young girl of sixteen developed a furuncle over the right mastoid region. Patient had no serious or prolonged illnesses. Two or three days previous to May 30 she noticed a small boil back of the right ear but paid very little attention to it until the morning of the 30th when it became painful, causing a stiff neck.

*Physical Examination*—A well developed, robust looking girl of 16 or 17. The eyes, ears, nose and mouth were negative. The face was flushed. Over the right mastoid region there was a small inflamed furuncle about 1 cm. in diameter. The neck was negative except for slight tenderness over the posterior right triangle where there was a slight glandular enlargement. Chest: Well developed lungs, good expansion throughout; no rales. Heart: Normal except for a rate of 110. Abdomen and extremities negative. The furuncle was small but it was considered the best treatment to incise it although no pus was found. Her temperature being 103 she was referred to the hospital on May 31. The original incision was deepened and extended over the original focus. The edema had extended to the face and over the whole neck down to the clavicles. The rectal temperature reached 105°. She lingered along for three days with the temperature ranging from 102 to 103 and pulse 120. She complained of pain in the head and had periods of irrational mumbling. She had spasms of muscular twitching while asleep. She frequently had involuntary defecations. June 4. The white blood count was 52,000 with 90 per cent polymorphonuclears, Lm. 6, Sm. 4. Her respirations ranged from 40 to 60. The blood cultures and cultures from the pus of the primary focus showed staphylococcus aureus. The urine was acid, specific gravity 1015, albumin, faint trace, no sugar. Microscopically it showed an occasional white blood corpuscle, an occasional hyaline cast, a few squamous epithelial cells and a few cocciform bacilli. The patient's medication consisted of morphine, gr. 1/12, as needed, for pain and restlessness, saline per rectum and hypodermoclysis and one daily intravenous injection of mercurochrome, 5 mg. per kilo. of body weight for four days. She expired at 10 p. m., June 4, 1924.

All of these patients had hemolytic staphylococcus infections as demonstrated by blood cultures, and all had high blood counts and profuse inflammatory edemas. Two of these had intravenous injections of gentian violet, two had intravenous injections of mercurochrome. One apparently overcame the blood stream infection, the other two did not. Exhaustion due to toxicity and ill nourishment, probably was responsible for the death of the first patient while exhaustion due to toxicity was probably the cause of death of the last two.

Two general divisions have been made of the bacteria causing infections, anaerobic bacilli in deep wound involvement and aerobic organisms less deep in the tissues.

Weinberg and Seguin offer a convenient clinical

classification of anaerobic infections, namely, virulent gas gangrene; avirulent gas gangrene. Several clinical manifestations are due to the virulent type. They are the emphysematous type, the edematous type, a mixed form, and a putrefaction form. Muscle and blood clot offer the best soil for the growth and development of these forms. Tendinous areas are less often involved.

In civil life there are two sources of these infections, soil contaminations, not very common, and the contaminations from the patient's own intestinal organisms, as found following uterine sepsis after abortion, particularly criminal abortion.

The aerobic organism may clinically be classed as virulent and avirulent, also represented by streptococcus, staphylococcus, diphtheria B coli, etc. The virulent organisms spread by three methods, namely, (1) Local extension; (2) Lymph stream; (3) Blood stream. Their effects are (1) Mechanical; (2) Biochemical; (3) Mixed.

Mechanical effects are produced by the formation of emboli which block circulation in the capillaries, thus interfering with nourishment. Swelling and edema result, causing interruptions in tissue nourishment. Biochemical effects are produced by the chemical action of their byproducts, ectotoxic and endotoxic, upon the tissues. Mixed: By the combination of any of the above factors.

The *symptoms* consist of a series of phenomena of varying manifestations. The complaint of the patient, sense of fatigue, fever, chills, headache, thirst, pain about the involved area, etc., are all variable factors.

The *diagnosis* is made only after a series of important tests. Usually one can find the local focus and in extreme cases there are evidences sufficient to account for the symptoms, as increased temperature, high white blood count, rapid pulse, lymphangitic streaks, inflammation, swelling and edema and enlarged spleen. These may differ and between the extremes there may be found the greatest number of variations. The temperature may be normal, there may be no increase in the white blood corpuscles, there may be very little pain, all due to a poor resistance on the part of the sufferer. The original focus may have healed leaving a secondary area of infection to light up later, with fatal results. Conheim says that the source may be identified if the sentinel lymphatic gland can be identified. Kanaval reports cases of staphylococcus infections whose primary focus healed, leaving secondary foci in the kidneys from which the patient died three months later.

One should look for the cause of the infection in the original focus, in the involved lymph glands, the blood stream, and in the urine from one or both kidneys in obscure cases. Needless to say, this is accomplished by taking repeated aerobic and anaerobic cultures from these sources with the greatest of care to avoid contaminations. Anaerobic infections are seldom seen in civil life but as previously stated may develop from soil infections or from the patient's own intestinal organisms. Ponet believes that infectious diseases are seldom due to a single organism. They generally represent a combination of biologic units. Streptococcus infections and for that matter



staphylococcus also, often have small foci with little pus located in the skin and mucous membrane. Septicemic cases generally have high temperatures, high white blood counts, great destruction of red blood cells, rapid decrease in hemoglobin.

Staphylococcus foci usually begin from cracks or abrasions in the skin or mucous membranes. These foci often heal with the formation of secondary abscesses filled with thick creamy pus, because staphylococci tend to grow in clumps. This forms a different type of lesion from the streptococcus. Liquefaction takes place frequently with a spreading of the abscess along the lines of least resistance between fascial planes and nerve and blood vessel tracts, as in case 1.

The tissue changes vary with the virulence of the infection, the location, and the resistance of the individual. There may be an immense edema with or without gas formation causing disturbance in cell relation, stasis, solution of continuity, tissue degeneration, and neurosis. Normally the blood capillaries pick up only molecular substances of extremely fine subdivisions, but Krogh has shown that blood capillaries dilate and become pervious to larger substances permitting escape of colloids of blood plasmas into tissues with stasis and agglutination of red cells. This stasis where red cells are agglutinated often forms a secondary form of infection in this advance of the disease.

Crile has shown that in septicemia if man is exhausted by exertion, emotion, loss of sleep and toxicity, he succumbs more readily to infection. He has shown that the most marked histologic changes take place in the brain and cortex of the suprarenal glands and are less marked in the liver and spleen. By his animal experimentation he has shown that less destructive changes take place in narcotized animals than those without morphine when lethal doses of toxin were injected. His results have shown that the brain is the primary factor in response to infection.

The *prognosis* is dependent upon several factors, the virulence of the infecting organism or organisms, the location of the focus of infection, its relation to the blood stream, and the lymphatics and a basic knowledge of the principles of inflammation produced by the various bacteria, coupled with the peculiar anatomical knowledge relating to the infection. Lymphatic infections follow a definite anatomical and clinical course and may be prognosticated and anticipated and according to C. H. Mayo are equally as dangerous. One must not forget that the resistance of the individual is a big factor in prognosis of virulent infections. Elimination of the primary foci is often very necessary. Resistance can often be sustained by maintaining proper elimination, prevention of exhaustion and aiding the circulation.

#### TREATMENT

The treatment depends upon the type and extent of the infection. Christopher has well outlined the treatment of pyogenic infections. It consists of: Physiological, chemical, surgical and x-ray. Physiological treatment comes through maintenance

of nutrition, establishing proper elimination by cathartics, diuretics, and diaphoresis, proper rest, reduction of pain even by the use of morphine if necessary, stimulation of resistance by the use of vaccines and blood transfusions, heat or cold to the involved parts as indicated.

Chemically, bacteria are killed by four methods: Oxidation, ionization with coagulation, coagulation without ionization and hydrolyzation. Hence any chemical chosen for this purpose must possess one of these four characteristics. But since nearly all chemicals which destroy bacteria react also on the tissues, it becomes a difficult problem to adapt such treatment. It was with this aim in view that Ehrlich spent so many years perfecting his salvarsan. Recently Young has given us mercurochrome and Churchman recommends gentian violet. The permanent value of these is yet to be ascertained. In the cases here reported the possible value of mercurochrome could not be calculated.

Locally, chemicals are adopted for sterilizing the surface. The most useful are boracic acid, Dakin's solution, alkaline baths, silver nitrate, and iodine. Christopher strongly favors the use of Unguente Crede as an antiseptic dressing in local infections.

Surgical procedures are useful and indicated for two purposes, namely, the control of the extension of infections, both aerobic and anaerobic, and in nature's repair of the same. Areas of necrosis should be removed. Release of tension where circulation is impeded is imperative in every case. Incisions for the drainage of pus, exudates and stagnant fluids are generally necessary but should be made with an exact knowledge of the anatomical structure, their relations, and functions, for mistakes may easily be made by not making the incisions large and deep enough. On the other hand one may make too radical incisions and extend rather than check the pathological process. Nature frequently acquires the habit of overworking, overproduction, providing more tissue than she needs in the repair of a wound. She frequently throws out excessive granulation tissues and once in a while she keeps on piling up excessive scar tissue, forming keloids. These often can and should be controlled by the surgeon in charge who should be ever mindful of his patient's well-being and appearance. Many happy results in repair are attained by secondary sutures, skin grafts and by the use of dressings, facilitating epithelization by the use of vaseline gauze, gutta percha, etc.

Just how much can be realized by the use of x-ray is a field for investigation. Dunham has reported successful treatment of sixty-seven consecutive carbuncles by the exposure of x-ray.

#### SUMMARY AND CONCLUSION

Here is an interesting class of diseases which up to the present time is most ingenious in its etologic and symptomatic devices. Its attacks are so varied that the physician is often nonplused in determining its line of greatest advancement, and one having this knowledge there can be no hard and fast rule instituted for its control. The physician must certainly know how his patient is responding in the combat, the nature and mode of the irritant, the

destruction caused by it, the best method of removal of the damaged tissue and the process of repair.

THE IMPORTANT FACTORS IN SEVERE PYOGENIC INFECTIONS CALL FOR: (1) EXPERTISE IN DIAGNOSIS; (2) ABILITY TO FORESEE ITS POSSIBILITY OF INVASION; (3) QUICK UNDERSTANDING OF THE PATIENT'S NEEDS IN HIS FIGHT FOR LIFE.

Some of the most important of these are:

- (a) Reduction of pain.
- (b) Maintenance of nourishment by means of food, water and blood transfusions.
- (c) Inducing proper elimination by the use of cathartics, diuretics and diaphoretics.
- (d) Use of disinfectants locally and systemically.
- (e) Surgical removal of necrotic and infected tissue.

#### DISCUSSION

C. A. DUKES, M. D. (Wakefield Building, Oakland)—I appreciate the request to discuss Dr. Barnes' paper on "Virulent Surgical Infections." Dr. Barnes has prepared a most excellent paper with case reports covering the subject in an illustrative way which I am sure will be appreciated by all who read this article.

I have been very much impressed with our apparent inability at times to control or limit the course of these infections, as was the case in these reports.

The diagnosis is so thoroughly covered that it does not seem fitting to dwell upon the necessity for thorough laboratory investigation through the blood stream of all infections that show constitutional involvement, but I am sorry to know that this is frequently a late rather than an early procedure.

Regarding the treatment: I have been very much interested in the chemical and surgical treatment of infections. To me, the chemical treatment, be it either the mercurochrome or gentian violet, or both, has been very disappointing. On the contrary, I have been very much impressed with the decided aid given by transfusions. Certainly, early in the infection, "debridement" and thorough drainage will be our great hope of limiting all infections. Amputation, well above the actively infected area, is frequently necessary and should be used promptly when the constitutional symptoms show that the control of the infection is being lost.

Certainly, any of the antiseptic solutions that do not destroy soft tissues and will aid in drainage should be used. By drainage, I mean that the wound should be so thoroughly open that all diseased tissue will be readily exposed to the action of the solution, and certainly, if the areas are not thoroughly and freely exposed, solutions are of no value.

I am glad that Doctor Barnes has also called attention to the necessity of returning the patient to as nearly normal as possible, taking great care as regards to injury to nerves and tendons, and also to the patient's appearance.

I have not had experience in the use of the x-ray in the treatment of carbuncles.

A careful reading of the conclusions of Doctor Barnes' paper gives one a very clear and understanding knowledge of the factors in severe pyogenic infections.

I cannot help but add to this good paper the necessity of the early care of all wounds. In the industries, all abrasions should not only receive immediate use of iodine, but should also have attention by a medical man as soon as possible. Also, the laity should be impressed with the same necessity. The first case of Doctor Barnes would have been cured of his first injury but got his second infection because of lack of knowledge of the danger of reinfection of open wounds.

C. E. PHILLIPS, M. D., (Pacific Mutual Building, Los Angeles)—The subject of "Virulent Surgical Infections" is always one of interest. The wide diversity of the posi-

tive opinions shows all too plainly the shortcomings of all. Doctor Barnes has presented in an admirable manner a phase of the subject which is timely. I deeply appreciate the opportunity of discussing it.

The common surgical infections, established, progress is one of, or in a combination of the following ways:

- (c) Through the blood stream.
- (a) Through the lymphatics.
- (b) Through the line of least resistance in the tissues.

A remedy with selective action on the infecting organism and no deleterious effect on the host would be ideal. We have no such substances except the specifics for animal parasitic forms, such as plasmodium malaria, the spirochetes and the trypanosomes. The bacterial forms possessing greater vitality and resistant powers are unaffected by remedies innocuous to the host. Certain drugs when introduced into the system may produce such a reaction that a given infection may be overcome. Where one case is thus saved the treatment will cause the loss of many others.

With our present knowledge of the subject I am convinced that the greatest benefit can be gained by a careful individualization of the cases: assisting the forces of nature in overcoming the infection.

The mechanical dissemination of infection can possibly be prevented by careful surgical intervention. By suitable drainage, relief of tension and by posture we can reverse the lymph circulation, within limited areas.

The Dakin treatment of wounds constitutes the greatest advance in the treatment of infected wounds and localized infections since the etiology of the process has been determined.

Frequently the progress of the infection can be determined only by the symptoms. A given focus of infection is attacked and destroyed by Dakin treatment. There is a continuation of the symptoms showing the existence of additional foci. The only treatment that offers relief is the careful search for and destruction of these centers.

The administration of the various dyes in such conditions is invariably deleterious. In the low grade septicemias, without definite foci on infection, there is the possibility of cure being brought about by the powerful reaction occasioned by the intravenous medication.

Infections seldom, if ever, require amputation unless it complicates severe traumatism. Amputation should not be performed unless the future usefulness of the extremity has been seriously jeopardized by the injury. Even in such cases it is usually better to amputate before the onset of the infection. When severe infection has become established it seldom gives a benefit commensurate with the shock of the operation.

Transfusions are seldom necessary and add another element of risk which can usually be avoided.

Severe infections of the face are especially serious on account of their proximity and accessibility to the vital centers. They should be treated by adequate incisions for the relief of tension and for drainage. It is of the utmost importance that a minimum amount of traumatism be done to the tissues in the drainage operation.

EDWIN I. BARTLETT, M. D. (240 Stockton Street, San Francisco)—There are two main types of infection, viz., local and general. A local infection is one which is still under control by the surrounding tissues. These may be the adjacent soft parts or the neighboring lymph glands. A general infection is one in which these barriers have failed to stop the spread and the inflammatory process has extended to the general circulation. Every general infection was once a local process.

Treatment of a local infection must be directed towards aiding the local resistance of the tissues and also the general bodily resistance. The methods employed vary somewhat with the type of organism. For instance, infections due to the pus forming organisms early require incision and drainage, while infections due to streptococcus should never be incised except in later stages if pus has formed in quantities which are demonstrable before incision is attempted.

There may be some difference also in the general treatment. As a rule the best treatment for streptococcus infection that has not yet passed beyond the neighboring lymph glands is continuous application of wet heat from



finger tip to chest, if the infection is in the finger, and absolute rest in bed on light diet. Heat applied off and on accomplishes comparatively little. Constant heat for twenty-four to forty-eight hours practically clears up the local process. What remains in the lymph glands or more distally will then yield to dry heat. Wet heat continued longer than forty-eight hours, reduces the resistance of the tissues. The wet heat should be given in such a manner that the limb can be elevated. This is best accomplished by wrapping the parts in hot towels. Some antiseptic solution such as lysol prevents the development of pimples. Six to eight bath towels wrapped about by several layers of wool will keep the limb hot for eight to ten hours at a stretch.

Treatment of a general infection is quite a different procedure. Unfortunately it is not so clear cut. Here the local wound is of practically no concern and the whole effort must be directed towards aiding the general bodily reserve. Recently the reports of use of various chemicals introduced into the circulation have raised our hopes, but the practical experience of the average man has been universally disappointing. Many cases have been saved and in most of these instances the effects of administration of the chemical have been nothing less than miraculous. Other patients have gone on and died and sometimes death seems to have been hastened by the reaction to the administration. There is much to be learned. Perhaps the dosage is insufficient, perhaps the poisonous effects of the organisms have left the human organisms too weak to recover even after the organisms have all been destroyed.

Dr. Barnes is to be complimented on his paper. He has taken up the study of the organisms and their mode of action, together with the study of the human physiology, during the operation of general infection. He is on the right track because thorough understanding of these principles will solve the problem of general infection and make our treatment as clear cut as the local process.

In the meantime the immediate task before us is the prevention of a general infection. There is very rarely any excuse for local infection becoming general while under the care of a physician. Proper treatment of the local condition will do away with practically all general infections excepting those which are well established when first seen by the physician.

## LUPUS ERYTHEMATOSUS ACUTUS DISSEMINATUS

### REPORT OF A FATAL CASE

By FRED B. CLARKE,\* M. D., *Long Beach*;  
A. W. WARNOCK,\* M. D., *San Pedro*

DISCUSSION by F. R. Mason, *Los Angeles*; Samuel Ayres, Jr., *Los Angeles*.

**LUPUS ERYTHEMATOSUS ACUTUS DISSEMINATUS** is, if one may judge from the literature, an exceedingly unusual condition. Scholtz, having reviewed the literature in 1922, found reports of twenty-seven cases, and there have been several cases reported since then by Goeckerman, Robertson and Klauder, and Pernet.

It is probable that this condition is of much more frequent occurrence than the number of reported cases suggests, because of the fact that the skin manifestations resemble, in some cases, such diseases as scarlet fever, erysipelas, pellagra, exfoliating dermatitis, spotted fever, etc., and the constitutional

symptoms may stimulate such acute infections as rheumatism, malaria, typhoid, etc. The diagnosis of rheumatism was made during one of the five attacks in this case, while during two subsequent attacks, the diagnosis was typhoid.

Review of various case histories suggests that the chronic disseminate type, occurring in an individual who has had the chronic discoid lesions for a long time, is the one most frequently encountered, and that the acute type, beginning without evidence of a previous chronic type of lesion, is exceedingly rare, and usually runs a course suggesting an acute septic condition.

Our case began without the characteristic chronic lesions, but with a history of four previous illnesses, during which there was a persistent fever, with mild arthritic disturbances and a skin lesion diagnosed as erythema nodosum, suggesting the constitutional background upon which the acute type of cases develop was present.

The underlying condition producing hypersensitiveness in these patients is a thing in which we are primarily interested, because of their reaction to toxins and to the removal of foci of infection, hypersensitiveness to tuberculin, etc. In addition the high mortality rate, once the condition is developed, is important. Text books devote but little space to the acute type, and the following classification by Robertson and Klauder would seem a good one:

"All varieties of lupus erythematosus appear to fall into four clinical groups:

"Circumscribed or discoid form, chronic, occurring chiefly on the head and face, especially on the nose, cheeks, and lobes of the ears. Diffuse or disseminated, of which there are three varieties: (a) Disseminated, but not acute; (b) Disseminated, acute, developing from chronic discoid form; (c) Acute from the beginning, rapidly becoming disseminated and running an acute course throughout.

"The disseminated but not acute, may be associated with mild constitutional symptoms which some writers style subacute disseminated lupus erythematosus, and others erroneously designate as lupus erythematosus acutus disseminatus. This group is more commonly seen than the pure type of lupus erythematosus acutus disseminatus. Patients in this group are doubtless potential candidates for the acute disseminated form of lupus. It is stated that the presence of albuminuria is of bad prognostic significance.

"Group (b), disseminated, acute, developing from the chronic discoid form of lupus and group (c), acute from the beginning, rapidly becoming disseminated, may end fatally in a few weeks or months. These cases, and particularly those falling in group (c), are further characterized by increasing evidences of constitutional involvement, partaking of the nature of some acute general infection. The two latter forms of lupus present a fairly uniform eruption on the face and palms, and a multiform eruption on the trunk and extremities. These are the pure types of lupus erythematosus acutus disseminatus, the lupus erythematosus aggregatus universalis (erysipelas perstans faciei of Kaposi), and group (c), the acute

\*Fred B. Clarke (1006 Southwest Pacific Bank Building, Long Beach), M. D. College of Physicians and Surgeons, Chicago. Practice limited to medicine. Hospital connections: Seaside and Community Hospitals, Long Beach. Publications: A Study of Proximo and Acro-Ataxia in Tabes Dorsalis (*Am. Jour. Med. Science*). Tie of the Abdominal Muscles of Thirteen Years' Duration, Location and Histopathology of Ninety-nine Brain Tumors. Lethargic Encephalitis, Poliomyelitis with Especial Reference to Treatment with Rosenow's Serum (*California and Western Medicine*).

*lupus erythematosus aigu d'emb le* of some writers, notably Pernet."

#### CASE HISTORY

J. L. H., male, age 34, white, married, a lumber surveyor, when first seen on the third day of his illness, complained of a stiffness of joints, nausea, general malaise, and anorexia, with the history that two weeks before the onset of the present illness, an impacted molar tooth had been extracted.

The skin showed no abnormalities except a slight generalized cyanosis and a coldness to the touch. His hands were stiff, especially the left, which he could not close, due to a previous synovitis. The spine and lower extremities were normal. The glands of the neck, axilla, and groin were palpable but not immoderately enlarged nor tender. A slough was present in the cavity of the lower, left, first molar, which had been removed two weeks before. The tongue was coated, the breath foul, but no lesions of the mucous membrane were found. The throat, lungs and heart were negative. The abdomen was negative with the exception that the spleen was enlarged and slightly tender, and the notch was felt about 6 cms. below the costal margin. The temperature was 102.6° by the rectum. The pulse was 80, full and regular, and the respirations 16, and normal in character. Blood: 80 per cent hemoglobin (Dare), 2300 white blood cells, 51 per cent polymorphonuclear leucocytes, 49 per cent lymphocytes (equal numbers of large and small), and no abnormal red or white cells. Two blood cultures were negative; Widal negative; urine negative except slight evidence of bile and albumin; Wassermann negative.

Within eighteen hours, a few maculo-papular lesions, which did not fade on pressure, had appeared under the right breast, but were not present elsewhere on the body. Within three hours these lesions spread all over the chest, abdomen and back, with some on the cheeks and lower forehead, but was not present in the axillary lines, nor lower extremities. The skin was taking on a slightly icteric tinge. By this time the throat became sore, and whitish lesions, not unlike masses of Koplik's spots appeared at the gingivo-labial angle. Smears from these showed, among numerous other organisms, *Fuso-Spirillary* organisms. The mouth became so painful that the patient was unable to swallow. By the fifth and sixth days the temperature dropped to normal, but the restlessness and insomnia continued. The prepuce and eyes showed a purulent discharge containing staphylococci and a few Gram-positive diplobacilli, and yellowish crusts appeared about the nose and the rash spread to the upper parts of the thighs. Blood count at this time showed 4,530,000 red blood cells, 3200 white blood cells, 81 per cent polymorphonuclear leucocytes, no pathologic cells.

The onset of constitutional symptoms of an indefinite nature accompanied by an unusual eruption, with rather characteristic involvement of the nose and face, combined with the history of previous attacks of an undetermined nature, accompanied in two instances at least by some sort of skin lesion, particularly on the hands, followed by a long convalescence, was, we thought, quite sufficient to justify a diagnosis of *lupus erythematosus acutus disseminatus*. Within thirty hours the left cornea perforated. The jaundice became very marked, and the patient was having frequent, copious, frothy, clay-colored stools. He was delirious at times, having delusions and hallucinations. The next two days the daily temperature fluctuated between 100 and 103.5°. The rash became practically confluent on the lower extremities, and the lesions of the trunk were covered with fine white scales, but the true character of those of the face was obscured by the abundant beard and the vaseline used to soften the crusts and prevent adhesion of the eyelids. There were well marked hemorrhagic crusts across the bridge of the nose and the malar portions of the cheeks. The lesions covered the entire body, except the scalp, the palms, and soles, though present in decreased numbers in the axillary lines. Ultraviolet radiation was given to which the patient reacted violently. On the fourteenth day he was given 0.3 grams of neoarsphenamin intravenously. Since a slight improvement was noted, this was followed by 0.45 grams the next day.

Bronchial pneumonia developed and death occurred twenty days after the onset.

Autopsy twelve hours later: After the beard and crusts had been removed from the face, the character of the facial lesions was more definite. On each cheek was a spot about 3x4 cm., extending over the bridge of the nose in typical butterfly fashion. Removal of these crusts revealed raw surfaces where the skin had been destroyed.

The viscera were all intensely bile-stained, and there was marked enlargement of the liver and spleen. Numerous small, hard, darkly pigmented glands one-eighth to one-quarter-inch in diameter were found in the omentum and the mesentery of the large intestine. The glands of the small intestine did not show this pigmentation.

Doctor Jean Oliver of the Department of Pathology, Stanford University Medical School, made a complete study of the specimens, but found no evidence of tuberculosis, and reported the changes in the skin as follows:

"Sections of the skin show a marked atrophy of the epidermis with thinning of the epithelial layer and obliteration of the papillae. In some places there is a hypertrophy of the horny layer; in others it is of normal thickness. Occasionally the epithelium is entirely missing, leaving a bare surface. In the dermis and corium there are evidences of a chronic inflammatory process consisting of an increase in the connective tissue, but very little 'round cell' infiltration. In one section there is a small abscess near a hair follicle, otherwise nothing significant."

#### MORPHOLOGY

*Lupus erythematosus acutus disseminatus* resembles the *erythema multiforme* type of dermatosis, and there is a decided tendency to consider this condition as belonging to that group. Certain it is that the type of eruption may and usually does vary decidedly in different cases, and may present almost any type of eruption from a macule to bullae, or there may be purpuric oozings or telangiectatic lesions such as in the case reported by Robertson and Klauder. In this case the lesions began on the breast and were of a bright red maculopapular type, which spread in great numbers within three hours over the chest, abdomen, back and neck, with but few on the face. They were maculopapular in character, bright red, distinctly elevated above the surface, and firm to the touch, remaining for the most part discrete, not fading upon pressure, and persisting with fresh outcroppings on the lower abdomen and legs. The case resembled spotted fever more than any other disease. The eruption over the trunk and extremities changed but little, except to become a darker red. In the older lesions, a fine, yellowish white scale was present, although over the legs a new crop developed without the earlier ones fading away. Upon the face the lesions were different, those over the nose, cheeks and forehead beginning as a macular eruption, which soon coalesced, becoming raised and covered with dark red, scaly crusts, undoubtedly due to capillary oozing. These incrustations were more marked on the nose, and extended over both cheeks, and to a lesser extent over the forehead. The blood-stained incrustations over the nose and cheeks formed a solid mass with no normal areas of skin. Loose, scale-like crusts continued to be formed, and at necropsy, when the entire crust was removed, almost complete destruction of the skin was found, although there were a few irregular islands of the inner layer of the skin remaining. The lips were covered with bloody crusts which the patient rubbed away occasionally, leaving an oozing surface.



Over the right breast and on the right arm, there were two areas 3.5x4.0 cms., over which there was a large, thick, brownish lesion, raised 5.3 cm. above the surface.

Over the forehead were rather dirty, grayish crusts, which tended to disquamate. The scalp was entirely free from lesions. Scar tissue and areas of alopecia were not found, indicating previous lesions.

The palms of the hands and soles of the feet were free from lesions.

#### SYMPTOMATOLOGY

From case histories, the acuteness of the onset, severity and progression of skin lesions and constitutional symptoms vary widely. Temperature is present in the acute cases, and in this instance was not unlike typhoid in its step-like rise; in fact a diagnosis of typhoid had been made during two previous attacks, and the patient stated that "you need not call this typhoid, as I have been placed in the hospital and had blood cultures and Widal's made several times, before the doctors could be convinced that I did not have typhoid." The temperature after the first week became irregular, and was what one might expect in a septic condition.

The leucopenia was present on the first day of temperature, being 2300, but became gradually higher, as the septic condition increased, reaching 7000 before death, with a normal differential count. Leucopenia seems to be a rather constant finding, and in a case reported by Goeckerman was 1800.

Jaundice occurred early and became gradually deeper, until the patient became intensely icteric. We have not noted this in other case reports.

Delirium occurred on the tenth day, similar to the low muttering type of typhoid, becoming gradually more marked until death.

Ulceration of the cornea occurred on the ninth day and, as far as we could determine, it did not result from trauma, but seemed to be the result of an infection of the cornea which finally perforated, producing an extrusion of the contents of the anterior chamber. Smears showed some pus cells, a few staphylococci, and an occasional Grampositive diplobacillus.

Early there was marked purulent discharge from under the prepuce, which was abundant and contained staphylococci and diplobacilli.

Stools on the eighth day became gray, and six days before he died they became voluminous and butter-like in character, denoting marked pancreatic insufficiency.

Because of the severity of the lesions in the mouth, food could not be given although local applications of butyn, anesthesin, etc., were used. Rectal feeding was resorted to until the patient became mentally confused, after which he took liquid nourishment fairly well, until three days before death.

#### PATHOGENESIS

The pathogenesis has never been satisfactorily determined. Glandular tuberculosis has been, for a long time, considered an essential etiological factor, but many cases do not show evidence of tuberculosis at necropsy, although there undoubtedly does exist in the majority of cases autopsied sufficient evidence of tuberculosis to warrant this factor being

of decided importance. Clinically, active tuberculosis is not a necessary feature upon which a diagnosis should be based, as it is not demonstrated in the average case. It is interesting to observe the warnings against the use of tuberculin as a diagnostic or therapeutic agent because of the marked susceptibility which some of these cases exhibit. Ravogli has reported a fatal case from the administration of .001 mg. of tuberculin as a diagnostic measure.

Stokes states that "glandular tuberculosis has been prominent in cases studied by him, and suggests the hypothesis that, when septic infection creates the hypersensitiveness, the result of a hematogenous infection by tubercle bacilli is a tuberculid, while when tuberculosis creates the hypersensitiveness the result of a streptococcal or septic invasion is disseminate lupus erythematosus."

The clinical picture presented in this case was that of a steadily progressing sepsis, against which the patient did not seem to have any resistance. The occurrence of nephritis as pointed out by Keith and Rowntree is of interest as being either an accompaniment or an etiological factor in this condition. Scholtz considers that pyonephrosis was the casual factor in his case. Our case has a persistent trace of albumin with an occasional hyalin and granular cast, and we have concluded that the kidney did not present any abnormality not easily accounted for by the general toxemia.

The outstanding thing which seemed to initiate the symptoms in this case was the extraction of the left lower first molar. No evidence of healing was present at the onset of temperature two weeks later, although a curetment of the alveolar fossa had been done one week after extraction.

Smears invariably showed the ordinary bacteria found in the mouth with a few fusio-spirillary organisms, but at no time was there a predominating organism.

Goeckerman cites three cases in which removal of a tooth had resulted in a stuporous state.

Treatment is usually not of particular value in altering the course of the acute type. In this case quinine and sedatives were used early. Neoarsphenamine was used in an effort to clear up the condition of the mouth.

Goeckerman, assuming a glandular tuberculosis, treated one of his cases with deep roentgen ray therapy, with excellent results. In this patient, because of the severity of his symptoms, x-ray was not used.

#### DISCUSSION

V. R. MASON, M. D. (Pacific Mutual Building, Los Angeles)—The authors have summarized the literature and stated many of the interesting problems presented by this disease. I have been struck by the similarity of the clinical picture presented by the reported instances of the disease. The only important variable seems to be the duration of the malady. This circumstance in the present state of our knowledge favors the assumption that we are dealing with a clinical entity and not with a peculiar reaction to a variety of causes. The patients seem to have acquired increased susceptibility to tuberculin, vaccines and minor infections and I believe we should consider this phenomenon as an important symptom of the disease. Moreover, if this is true, it would explain the frequency and seriousness of secondary com-

plications which are usually the direct cause of death of patients suffering from the malady.

It has been observed and confirmed that in certain instances of this disease human tubercle bacilli may be present in lymph glands which are not the seat of tubercle formation. This may be explained by the unique "hyper-allergic" reaction of these patients to tuberculin. In such instances we should expect marked constitutional reaction with little tubercle formation.

SAMUEL AYERS, JR., M. D. (Westlake Professional Building, Los Angeles)—The acute disseminated type of lupus erythematosus is a rare disease and my personal experience with it is meager. One of the most striking facts is the apparent inadequacy of pathological findings. Two recent cases with necropsy findings reported by Keefer and Felty showed abdominal tuberculous glands as the only pathological findings of note, and in one of these cases tubercle bacilli of the human type were recovered from a lymph gland, which did not show the histologic lesions characteristic of tuberculosis.

Foci of infection of a non-tuberculous type certainly play an important etiological role in the ordinary sub-acute or chronic types of lupus erythematosus. I have one striking example of this in a woman who developed a rather acute facial lupus erythematosus with classical symptoms, in whom chronically infected tonsils were found. After persisting some months the eruption cleared immediately following tonsillectomy—in fact before the patient had fully recovered from the operation—and has not recurred during the past three years. All possible foci of infection should be searched for in all types of lupus erythematosus—tonsils, teeth, sinuses, prostate, intestinal tract, kidneys, bladder, etc., as well as tuberculous glands and other tuberculous foci.

## CLINICAL ASPECTS OF INTESTINAL PROTOZOIASIS

By ANDREW BONTHIUS,\* M. D., Pasadena

*Pathogenic parasitic protozoan infections, like bacterial infections, often exist indefinitely in a host without producing symptoms; often they cause such mild symptoms as to escape complaint by the patient; and often the chronic or secondary symptoms are so atypical and indefinite, and so far remote from the actual seat of infection, that the etiologic cause may escape the attention of the physician.*

*The presence of pathogenic protozoa or their cysts is the only sure proof of the infection.*

*No patient can be declared cured of intestinal protozoiasis unless, in addition to clinical improvement, the stools remain negative upon successive periodic examinations for at least a year.*

DISCUSSION by H. E. Butka, Los Angeles; R. Manning Clarke, Los Angeles; Herbert Gunn, San Francisco, and John F. Barrow, Los Angeles.

IN this paper I purpose to discuss chiefly the secondary manifestations, diagnosis, and treatment of intestinal protozoiasis. The parasitic protozoa included in this consideration are the amœba dysenteriae, balantidium coli, giardia or lamblia, chilomastix, trichomonas, pentatrichomonas, cragia, and councilmania. Each of these, independently or together with one or more of the others, can and often does cause strikingly similar secondary manifestations.

"Entamœbic dysentery is an acute or chronic specific disease of the intestine, caused most commonly by entamœba histolytica, but in some instances, possibly, by other species. These entamœba

enter the intestines with food or water and produce colitis and extreme enteritis, characterized by the passage of frequent motions, which generally contain blood and mucus and are associated with abdominal pain and tenesmus. At times they also produce abscesses in the liver and other parts of the body." One may quite correctly add that the above-mentioned parasites, alone or together, may cause the same clinical symptoms.

This definition by Castellani is quite similar to definitions given by several other authors. It is satisfactory for the acute type, but very often the chronic type, or secondary stage, is not characterized by all or even by any of these symptoms. Not every patient whose intestinal tract is invaded by these parasites develops dysentery, severe, mild, or at all. Many go through what may be termed the first stage of invasion by amœba without any, or at most, insignificantly mild, symptoms, and pass on to what I choose to call the secondary stage with its manifestations.

All authorities agree that, under certain conditions, focal infection may exist from one to twenty or more years, during which it may be latent, intermittently active, and later continuously so, depending upon the changed virulence of the invader, and the loss of immunity by the patient, or both. Secondary lesions of focal infection may occur so slowly as to induce no symptoms, and the patient may be unaware of anemia, nephritis, endarteritis, until an advanced stage of invalidism is reached. Rosenow has proved that streptococci in focal infections are not only pathogenic but often possess truly remarkable specificity, for certain organs or cells of the body, as the gall-bladder, stomach, appendix, muscles, kidneys, nerves or heart.

It has been generally accepted as true that bacterial infection may exist indefinitely in a host before producing clinical symptoms and causing symptoms far remote from the actual seat of infection. Why can this not logically hold true for pathogenic parasitic infections also?

From my observations of a series of seventy-four cases with positive parasitic findings, I am of the opinion that bacteria and parasites invade and effect their hosts much alike. This is particularly true of the type of infection most frequently encountered in Caucasians in temperate climates.

My seventy-four patients included those from 3 to 70 years of age; thirty-three were females, forty-one males; forty-nine had lived from one to thirty years in the Orient, two had spent considerable time in Europe, the others had never been out of the United States.

The most frequent complaint offered by these patients was general indisposition, tiredness, exhaustion, lack of energy, in other words—*asthenia*. Fifty-one of the seventy-four gave this as their major complaint. The asthenia is extremely varied in degree and type.

CASE 1—Male; 45; previous history unsuggestive. He complained of "all-tired-out" feeling, a "lead cap" headache and indigestion with distress after eating and loss of appetite.

Physical examination revealed no positive evidence of trouble other than severe pain on deep gentle pressure in the gall-bladder region and a generalized mild icterus. Microscopic examination of feces revealed councilmania.

The patient was given the Weir-Mitchell rest treatment

\*Andrew Bonthius (314 Professional Building, Pasadena), M. D. Northwestern University, Chicago. Practice limited to internal medicine. Hospital connections: Los Angeles General Hospital, Pasadena Dispensary. Appointments: Consulting surgeon, U. S. P. H. S., Ancoy, China, 1910-1913; Hope and Whillemenia Hospitals, Ancoy, China, 1910-1913; Broadway Dispensary, University of California, Los Angeles.



for five weeks under the most favorable conditions and surroundings. At the same time, specific treatment (described later) for parasites was carried out. The patient made some, but not a complete recovery. The lead cap headache almost entirely left and strength returned to a large degree. But icterus and pain in the gall-bladder region continued as before. The gall-bladder was removed and found to be a chronic cholecystitis. No parasites were found in the gall-bladder contents.

This case is of interest because of the lead cap headache, which was very distressing; and because of chronic cholecystitis, which quite probably was secondary to the primary parasitic infection of the intestine. Had I not given the specific treatment before the cholecystectomy was performed, I might have found the parasites in the gall-bladder contents. As it was, the intestinal infection was cleared up and the effects of the gall-bladder infection persisted, just as is usually the case when chronic cholecystitis is secondary to a typhoid infection decades before, or to pneumonia or appendicitis or any focal infection anywhere else.

In this series I have encountered three patients with almost unbearable headache. Other patients developed a secondary cholecystitis, and one appendicitis. In the latter instances the diseased parts had to be resected after the specific treatment was completed. The specific treatment usually will eradicate the parasites, but it cannot correct the pathologic results caused by them.

CASE 2—A physician, 50 years of age, gave a history of having had an attack of dysentery years ago, while residing in the Orient, but had since then been constipated most of the time. His only complaint was a lack of ambition and the almost constant desire to sleep. Past and present history were otherwise negative.

Chilomastix and entameba dysenteriae were found. Specific treatment was given and the patient states that he is now enjoying his work to the full and the morbid somnolence has left him.

CASE 3—A nurse and the mother of two children. She had lived in the Orient. She was rugged and apparently quite well, but complained that she had not felt equal to her domestic responsibilities for the past year and tired very quickly, which she had never done before. She gave no history of diarrhea.

Giardia, entameba dysenteriae, councilmania and trichuris were found. Specific treatment was given and now she feels fully recovered.

CASE 4—Governess, 66 years of age, had traveled extensively for years in this country and in Europe. A physician in another city had told her she probably had a neoplasm in her abdomen and should have an x-ray. Because she preferred to be cared for in Pasadena he referred her to me. I found her past history negative and the physical findings negative with the exception of a decided thickening of the walls of the palpable parts of the colon. She came stating that she felt so "all-in" that she didn't care to live any longer. After specific treatment was started and nearly completed, she was able to resume her usual work with normal vigor.

Osteoarthritis is a symptom commonly encountered.

CASE 5—A Mexican woman, about seventy, with advanced articular deformities of hands and feet, accompanied by almost constant rheumatic pain flashing up and down her arms and legs, obviously of long standing.

Councilmania and entameba dysenteriae were found. The specific routine treatment has been completed and she reports some relief from the pain. However, it is very questionable that we can give this patient any permanent relief. Her treatment will be continued over a period of time longer than usual and the results noted.

This is the type that Ely classifies as the second great type of chronic arthritis. It is characterized by cartilaginous and bony outgrowths at the margins of

the articular cartilages. The disease is common and is known by many names, such as osteoarthritis, hypertrophic-arthritis, degenerative arthritis, senile arthritis. Ely states that "chronic arthritis of the great second type is caused by some form of non-bacterial organism, probably a protozoan, which, domiciled in the gastro-intestinal tract, gains access to the system through the foci of osteomyelitis about the roots of the teeth and causes an aseptic necrosis in the marrow in the region of the joints." The striking feature about this series is not the presence, but the absence of dysenteric symptoms following inflammation of the large or small intestine or both. In fact, only one of my patients had these classical symptoms, which in this instance were caused by chilomastix. A second patient gave a history of alternating periods of loose movements and periods of well-formed ones. A third gave a history of large mucous casts passing frequently, but she was habitually constipated. The remaining seventy-one, with only a few exceptions, stated that they were constipated. The term, dysentery, is a misleading one and a misnomer when applied to the secondary stage of these infections.

The most important finding is that pathogenic varieties of protozoa were present in every patient. But so are some of these parasites present in apparently normal individuals without producing symptoms, you may say. That is true and so are there individuals, enjoying apparent good health, who are the hosts to the spirochetes, diphtheria bacilli, tubercle bacilli, or other microbes. The resistance of an individual to a given infecting agent does not assure the nonpathogenicity of that same germ when invading another host, particularly one with a low resistance.

It is not always easy to find the parasites. If a warm stool can be examined, and the ameba or flagellates can be seen in motion, the diagnosis is easy. This, however, is often impossible, often unreliable and unnecessary. The specimens may be examined cold and the cysts be seen with eosin iodine stain. But this necessitates some precaution. The specimen should be kept in a uniform moderately warm temperature and in a moist condition. The ameba die quickly when exposed to the open air and some cysts disintegrate very quickly under atmospheric and thermal changes and putrefactive gases.

The specimens of my patients are all examined in my own laboratory. The fresh specimens are examined and permanent slides are made for more careful study. Specimens are also sent to Professor Kofoid for a check on my work. I am greatly indebted to Professors Kofoid and Swezy, with whom I studied, for my training and for their unselfish assistance in differential diagnosis of the parasites.

Several times when my findings were positive, negative reports were returned from Kofoid; and there were instances when I did not find any parasites, but Kofoid did. At first, I concluded that I had made a mistake, which is easy to do, because it is not always easy to differentiate an ameba dysenteriae from a coli, beutschilli or some others.

One patient had a heavy infection of very motile chilomastix. The six consecutive specimens were

heavily loaded. Kofoid reported negative for all of them. Six specimens from each of eight other patients were found positive in my laboratory and negative by Kofoid. Later, I sent a permanently stained slide made from the fresh specimens of each of these eight patients, and one additional one, to Kofoid's laboratory; they reported that five of the nine specimens were positive and the other four slides were not stained satisfactorily.

The discrepancies between the reports from the University of California laboratories and my own are no reflection on the reliability of the work in either instance. It only means that the parasites often die or their cysts disintegrate easily under changing conditions, and, therefore, the sooner the specimen can be examined the more reliable will be the findings.

Then, too, it is important to bear in mind that not every intestine infected with parasites yields parasites or their cysts with every bowel movement. Frequently a patient may present entirely negative specimens for days and then, without any known cause, the specimen will again be heavily infected. One patient whose symptoms and clinical history were quite positively due to parasitic infection, had negative specimens for twenty-two consecutive days. The twenty-third day the specimen was heavily infected with *chilomastix*. One or two negative specimens are not sufficient for a diagnosis of the absence of intestinal parasites.

The treatment of patients with intestinal protozoiasis should be by the intensive employment of some form of ipecac and arsenic in conjunction with thorough bowel irrigations.

Ipecac may be given in powdered form; in capsules, salol coated; in fluid extract—drachm doses—through the duodenal tube; or in the form of emetine hydrochloride—one-third gr. to two-thirds gr. doses—subcutaneously, intramuscularly or intravenously. Intravenously is the best method and the least annoying to the patient. The dose should be given once daily for twelve or fourteen days in succession. It should be borne in mind, however, that ipecac or its derivatives, has no therapeutic value in the treatment of the flagellates.

It is well, at the beginning of the treatment, to inform the patient of the toxic effects of ipecac, because patients commonly complain of a general more or less extreme fatigue, which may develop into a real myalgia, especially of the leg muscles. Frequently patients complain of severe sacro-iliac distress. Two of my patients developed a severe cardiac myalgia and insufficiency. The above mentioned symptoms usually begin to appear about the second week of the ipecac treatment and begin to disappear soon after the administration of the drug is discontinued, though for weeks later the patient may still complain of a degree of this distress. Some patients needed to be confined to their beds during treatment.

After the course of ipecac has been completed, arsphenamine or neoarsphenamine is administered intravenously, beginning with 0.30 gm. and increasing to from 0.60 to 0.90 gm. From four to six doses are given from five to seven days apart.

Some have given neoarsphenamine through the duodenal tube for the treatment of giardia. Mehr-

tens has shown that when doses, 4.0 gm. are given in the rectum a very large amount is absorbed into the blood and eliminated in the urine. Some treat children by giving the arsphenamine per rectum. Kantor believes that we have in arsphenamine or neoarsphenamine therapy a precise and effective method of reaching susceptible protozoan parasites no matter how deeply they invade the intestinal or biliary mucosa.

Bismuth emetine iodide is given in 3.0 gr. doses nightly until 42.0 grs. are taken. This is best dispensed in double capsules, salol coated, and taken at bedtime. This drug may be given simultaneously as the course of arsphenamine is being given or after it is completed.

The use of mercurochrome in 3.0 gr. doses daily for from ten to fourteen days has been reported as a successful method of treatment.

Enema containing parasitocidal drugs such as quinine, camphor bichloride and coal-oil, have been recommended. If we could be certain that the parasites confined themselves to the large bowel, there might be considerable good results obtained from such enemas. But it is well known that these parasites infect any or every portion of the intestinal tract, including gall-bladder and appendix.

Therefore, I prefer to use duodenal irrigation, not lavage but irrigation, using one and a half quarts physiologic salt solution. This is given every day for three weeks, every other day for three weeks, twice a week for two weeks, and then indefinitely once a week if the patient is troubled with constipation. This method flushes the entire intestinal canal, small and large, in about half an hour and does not exhaust the patient. This is a practical procedure from the standpoint of the patient. Every patient, almost without exception, can be taught to swallow and pass the tube into the duodenum, and then, to take the duodenal irrigation at home.

After the treatment has been completed examinations of the stools should be repeated. If a series of at least six specimens be negative, further examination may be postponed for three months. If, by then, the parasites and symptoms have reappeared, the routine treatment should be repeated. If the symptoms have completely disappeared or have been arrested and series of examinations at three months' intervals over a period of a year are negative, the patient may be declared cured.

It is not uncommon to find the parasites again several months after a course of treatment has been completed. Frequently it will be necessary to keep the patient under treatment for from six to twelve months. The treatment of patients infected with intestinal protozoa often must be intensive, persistent and extended, in order to accomplish eradication. Some patients are never completely freed of the parasites; but in spite of this the treatment may effect marked improvement.

1. The secondary manifestations of protozoan infection vary widely.

#### CONCLUSIONS

2. The presence of the pathogenic parasites or their cysts is the only sure proof of the infection. A series of not less than six specimens should be



examined before a negative diagnosis is considered established.

3. The recognized specific treatment is ipecac and arsenic in their various forms, and intestinal flushing over a definite period of time.

4. No patient can be declared cured unless the symptoms have discontinued and the stools remained negative over a period of a year.

5. One course of treatment may not effect complete eradication of the parasite.

6. Protozoan infections must be considered in our differential diagnosis just as bacterial infections are.

#### DISCUSSION

H. E. BUTKA, M.D. (White Memorial Hospital, Los Angeles)—The subject of intestinal parasites especially appeals to me. Opinions as to the role of the flagellates and certain ameba varies. It is not difficult to convince ourselves of the pathogenicity of the various cestodes and nematodes and flukes when found in the intestinal tract, yet we find many times these parasites may not produce clinical symptoms. But when we come to the smaller microscopic parasites the same difficulty exists as once existed in convincing the world of the pathogenicity of certain bacteria.

My experience with intestinal parasites during the last few years convinces me that in most instances there are definite clinical symptoms associated with the presence of these parasites. These may be manifested by diarrheal conditions, gastro-intestinal disorders of a periodic type, neurologic symptoms, or general constitutional symptoms. As in infestation with *Entamoeba histolytica*, there are frequently periods of inactivity on the part of the parasites, and it is these periods of absence of symptomatology that some physicians point to as proof of their non-pathogenicity.

R. MANNING CLARKE, M.D. (606 South Hill Street, Los Angeles)—I have very much enjoyed this excellent paper by Doctor Bonthius, which so ably discusses the intestinal protozoa. The question of diagnosis is always a hard one in these cases, and I agree with Bonthius, in the matter of urging frequent and repeated examination of stools. It often happens that one examination of a stool is made and a diagnosis of no parasites given. This is certainly preposterous. I have enjoyed this evening hearing Bonthius urge the matter of repeated and frequent stool examinations before it is decided that there are no parasites present.

Regarding the pathogenicity of some ameba there is no difference of opinion. However, regarding some of the flagellates, such as the chilomastix, there is some difference of opinion regarding their pathogenicity. I know of many most able writers who believe that such parasites as the chilomastix are present as some result of some other condition that excites inflammation or trouble in the tract. For instance, I have seen patients with ulcer put on Sippy management, keeping the hydrochloric acid controlled by alkaline powders given by mouth. After this has attained for a certain length of time, I have seen chilomastix and other flagellates appear in the stools only to disappear again after the alkaline treatment had been stopped and the hydrochloric acid allowed to reappear in the stomach.

I recently had a case of amebic dysentery that had also a large number of chilomastix. As soon as the ameba disappeared there was no more trouble with the chilomastix. In British literature this idea prevails more than it does among American writers. Personally, I am rather inclined to their point of view, although I am not prepared to back it up entirely. There is much more yet for all of us to learn regarding this subject.

I feel there is nothing to be added to what Bonthius has given us about treatment. Certainly stools should be examined repeatedly and painstakingly. To give a patient one round of emetine treatment and turn him loose with the assurance that he is well is wrong. All of us have

seen this done and have also encountered the resulting disappointment on the part of the patient.

HERBERT GUNN, M.D. (350 Post Street, San Francisco)—During the past few years considerable interest has been evinced by the medical profession in the subject of protozoan infections of the intestinal tract and much has been added to our knowledge of the subject. However, nothing has been adduced up to the present time to warrant the assumption that all protozoa found in the stools are pathogenic. The pathogenicity of *Entamoeba histolytica* is, of course, well recognized.

*Entamoeba coli* is generally accepted as being non-pathogenic, which is, I believe, usually the case. Occasionally *Entamoeba coli* infections apparently produce symptoms usually of a non-dysenteric character which are relieved by eradication of the parasites. However, in such cases the possibility of the presence of an undemonstrated *Entamoeba histolytica* must be taken into consideration.

The ameba referred to by Bonthius as a councilmania can safely be considered as a *coli*. The flagellates are, in my opinion, usually harmless and if any symptoms are produced by them they are transitory and indefinite. There certainly is no warrant for the wholesale incrimination of these parasites for the numerous symptoms often ascribed to them. It is fortunate that the flagellates are practically harmless for we have had no drugs which will destroy them.

There is certainly not the slightest foundation for the belief that arsphenamine or neosarsphenamine combined with ipecac, or its derivatives, has any destructive effect on intestinal protozoa other than amebæ.

During the past twelve years I have used ipecac and emetin combined with salvarsan and neosalvarsan for the treatment of amebiasis on several hundred cases, and these drugs have not had the slightest effect on any of the flagellates as far as their eradication was concerned.

It may be possible that treatment is indicated in individual cases for flagellate infections, but I can find no justification for the general treatment of all such cases.

JOHN V. BARROW, M.D. (2007 Wilshire Boulevard, Los Angeles)—I wish to welcome Doctor Bonthius' paper on protozoa and to emphasize a few of the points we have been struggling to bring out for years.

There is not much criticism to be offered in his presentation. The subject matter brings up points of disagreement among clinicians because of the varying clinical experiences each one has had in the treatment of these diseased persons. The clinical picture drawn by Castellani can certainly be produced by several of the protozoa, either singly or collectively, and the clearing up of these infections results in better health to everyone treated.

I am sorry Bonthius has not given the blood pictures in his cases. The white cell count with the differential, in my experience, is certainly significant as has been recorded in the literature previously.

There is no doubt that arthritic cases improve generally in proportion to the success we have in ridding them of these parasites. I think the argument here is logical and based on correct clinical facts. We must wait for chemistry and biology to prove this point. The only facts we have at present are clinical. There is not one vestige of laboratory work against the contention. Clinical evidence should have the right-of-way until there is at least some other evidence against it. Like Mark Twain's death, the myocardial weakness produced by ipecac and emetin has been very much exaggerated. I certainly do urge the treatment of all protozoan cases, flagellates, as well as the amebæ. The fact that the organisms are difficult to eradicate is taken to mean that they are non-pathogenic, but it must be remembered that certain spirochetes and tubercle bacilli are difficult to eradicate.

The symptomatology of protozoan infection is indefinite, but not transitory. The organisms are chronic and the change in the system produced by them is a decided clinical imbalance which clears up generally when the parasites are gone. It is logical that these organisms may be present for years before this imbalance is produced.

I am glad that Bonthius has discussed much of the treatment. I believe the arsenic preparations are destruc-

tive to the giardia in the duodenum. From my experience, neo-arsphenamine into the vein is not particularly harmful to the amœba. Stovarsol internally has been much more efficacious in my cases.

We shall advance rapidly in treatment as well as in pathological proof of the harmfulness of these organisms, when someone cultivates them in pure culture. What we need is their isolation and culture in the same manner we cultivate typhoid and diphtheria organisms. At present the clinical expression of these parasites should lead us in regard to their treatment.

I have no sympathy with the contention that only one organism, the amœba, out of the great group of protozoa can be harmful to mankind. That contention would be analogous to claiming that there is only one insect injurious to farm crops.

## RICKETS

*Langley Porter, who has been in Europe traveling and studying for over a year, sends the following resumé of our knowledge of rickets.—EDITOR.*

Rickets is a disease affecting all the bodily tissues, especially the osseous, the nervous, the muscular, and the epithelial. The changes in the bones are the most visible, especially in the earlier stages of the disorder. For this reason and also because the x-ray can be used to record even the earliest of such changes rachitic anomalies of ossification and of bone structure have been much studied also. The fact that extreme degrees of bony change lead to deformities that interfere with skeletal function lends further interest to studies of the osseous changes in this disease.

The changes in the nervous tissues tend to establish conditions of heightened irritability and diminished inhibition; conditions that are the basis of the clinical entity which is called tetany and whose symptoms are ready access of convulsive seizures, facial irritability, carpopedal spasm, laryngo spasm, emotional instability and anomalies of behavior. These discernable tissue changes are, however, the results of an alteration of metabolism which is revealed by a change in the ratio of calcium to phosphorus in the blood serum and by a decrease in its contained bases, a relative acidosis. This metabolic imbalance is brought about by some noxious influence acting on the rapidly growing tissues. Present opinion holds that this noxious influence is permitted to act because the body receives an insufficient stimulation of radiant energy, especially of that form of radiant energy which emanates from the violet part of the spectrum in waves of a length close to 300 mm. Such radiant energy appears to be essential in order that the chemistry of the tissues should proceed with optimum energy and the metabolism produce normal growth.

The radiant energy is received directly from the impingement of sunlight on the body and indirectly from accessory foodstuffs, especially the fats and the green leaf vegetables in which it is stored in static form. After digestion, metabolism has the power to transform this static energy to dynamic in a form that acts on the chemical events that happen in the body in such a way that it increases their speed and vigor. Apparently, through the aid of these accessory foodstuffs which we call vitamins, the whole series of oxidations and reductions which constitute life is speeded up and perfected. Apparently each

grown individual has his own quantitative need for such radiant energy. If he fails to receive all that he needs, he develops rickets.

In most latitudes under usual conditions of housing, climate and clothing, the direct radiations that reach the growing human do not suffice to supply his optimum needs, therefore, it becomes necessary to make up the lack by the ingestion of such foodstuffs as have the radiant energy stored in the forms we call vitamins. An especially rich source lies in cod-liver oil. The fats of milk, from properly housed and pasture-fed cattle, and the green leaf vegetables, are the most dependable and available sources of supply.

Recently, apparently successful attempts have been made to increase the radiant energy content (vitamin value) of such foodstuffs by subjecting them to the influence of violet-rays originating in mercury vapor lamps and quartz lenses. The winter season and substances suspended in the atmosphere such as fog, cloud, smoke and rain, may prevent a large part of the violet emanations from reaching the human body. Window-glass and the usual clothing provide further hindrances. For these reasons it is necessary, especially during the winter months, to insure to the growing child a full supply of vitamin containing foods. This we can do most certainly by feeding cod-liver oil in addition to milk fat, green leaf vegetables, egg yolk, and the juice of the citrus fruits, and the tomato. Heliotherapy, or radiation with mercury vapor lamps, will give an added insurance against the development of rickets. It must not be forgotten, however, that the ingestion of an ample supply of antirachitic vitamin is no certain preventive of rickets. For the patient may be subject to disturbances of digestion, of assimilation that interfere with the proper absorption and the utilization of vitamins. On the other hand, he may be the victim of some parental infection or intoxication which hinders that acceleration or stepping up of metabolism which is normally consequent upon the influence of radiant energy, whether it be derived directly from light or indirectly from the supplies stored in the vitamin carrying foods. The consideration and cure of all such illness is imperative in all attempts to prevent or to cure rickets.

384 Post Street.

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The Doctors and Other Citizens of Oakland and Alameda County are hosts to the California Medical Association at this year's session which will be held April 26 to May 1, 1926, inclusive. The interesting program which is being prepared provides for a whole week of social pleasures and scientific work. This ought to be a banner meeting of the State Association.

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## EDITORIALS

### THE SUPREME COURT DECISION IN LINDER VS. UNITED STATES—AS IT AFFECTS THE HARRISON NARCOTIC ACT

Many physicians and other citizens are keenly interested in the full meaning of the decision (April 13, 1925) of the United States Supreme Court construing the Harrison Narcotic Act in *Linder vs. United States*. So much disturbance was caused by an exciting story of this decision, published in the bulletin of the "White Cross," that at our request, Dr. W. C. Woodward, executive secretary, Bureau of Legal Medicine and Legislation, American Medical Association, prepared for us the following useful analysis of the whole question:

The decision referred to in your letter of February 2, construing the Harrison Narcotic Act, is that of the United States Supreme Court in *Linder vs. United States*, decided April 13, 1925. That decision is as binding in California as in any other part of the United States. It will undoubtedly add to the difficulties of enforcing the Harrison Narcotic Act, but it helps to clear up a situation often embarrassing to the physician and tends to relieve him of bureaucratic control.

Treasury Department Regulations No. 35, relating to the importation, manufacture, production, compounding, sale, dispensing, and giving away of opium or coca leaves, their salts, derivatives, or preparations thereof, promulgated under the Harrison Narcotic Act, provide, among other things, as follows:.

"Article 117. . . . An order purporting to be a prescription issued to an addict or habitual user of narcotics, not in the course of professional treatment in an attempted cure of the habit, but for the purpose of providing the user with narcotics sufficient to keep him comfortable in maintaining his customary use is not a prescription within the meaning and intent of the act; and persons filling and receiving drugs under such an order, as well as the person issuing it, will be regarded as guilty of violation of the law."

Color was given to the supposed validity of this regulation or instruction by decisions of the United States Supreme Court, namely, *U. S. vs. Doremus*, 249 U. S. 93; *Webb vs. U. S.*, 249 U. S. 96; *Jin Fuey Moy vs. U. S.*, 254 U. S. 189, and *U. S. vs. Behrman*, 258 U. S. 280. These decisions were generally construed as preventing a physician from giving narcotics for the relief of the sufferings of an addict incident to the withdrawal or insufficiency of his supply of narcotics, except as an incident to the cure of the habit and even then only when the patient was in confinement. The result has been that no matter how acute the sufferings of an addict might be, incident to the partial or total withdrawal of his drug, the average physician was afraid to do anything for his relief, lest he be summoned into court and held up to public obloquy as a "dope peddler."

There now comes into the case one Charles O. Linder, of Spokane, Washington. Linder is recorded in the American Medical Directory as having graduated in 1905 from the Thompsonian Medical College, of Allentown, Pennsylvania, concerning which the directory records: "Organized in 1904. Extinct. No evidence to show that classes were ever held." Linder, however, appears to have been registered in the state of Washington in 1920. The facts of the case seem to be sufficiently stated in the opinion of the court, where they are quoted from the indictment. They charge Linder with a violation of the Harrison Narcotic Act on about April 1, 1922, at Spokane—

"in that he did then and there knowingly, wilfully and unlawfully sell, barter and give to Ida Casey a compound, manufacture and derivative of opium, to-wit: one (1) tablet of morphine and a compound, manufacture and derivative of coca leaves, to-wit: three (3) tablets of cocaine, not in pursuance of any written order of Ida Casey on a form issued for that purpose by the Commissioner of Internal Revenue of the United States; that the defendant was a duly licensed physician and registered under the act; that Ida Casey was a person addicted to the habitual use of morphine and cocaine and known by the defendant to be so addicted; that Ida Casey did not require the administration of either morphine or cocaine by reason of any disease other than such addiction; that the defendant did not dispense any of the drugs for the purpose of treating any disease or condition other than such addiction; that none of the drugs so dispensed by the defendant was administered to or intended by the defendant to be administered to Ida Casey by the defendant or any nurse, or person acting under the direction of the defendant; nor were any of the drugs consumed or intended to be consumed by Ida Casey in the presence of the defendant, but that all of the drugs were put in the possession or control of Ida Casey with the intention on the part of the defendant that Ida Casey would use the same by self-administration in divided doses over a period of time, the amount of each of said drugs dispensed being more than sufficient or necessary to satisfy the cravings of Ida Casey therefor if consumed by her all at one time; that Ida Casey was not in any way restrained or prevented from disposing of the drugs in any manner she saw fit and that the drugs so dispensed by the defendant were in the form in which said drugs are usually consumed by persons addicted to the habitual use thereof to satisfy their craving therefor and were adapted for consumption."

Linder was convicted in the District Court, Eastern Court of Washington. His conviction was affirmed by the Circuit Court of Appeals for the Ninth Circuit. On a writ of certiorari, Linder carried the case to the United States Supreme Court. The decision of the court may be regarded as explaining through the written opinion, and as undertaking to clarify, its previous decisions.

The court quoted from its decision in *United States vs. Behrman*, 258 U. S. 280, and differentiated that case from the Linder case, in the following language:

"It may be admitted that to prescribe a single

dose or even a number of doses, may not bring a physician within the penalties of the act; but what is here charged (in the Behrman case) is that the defendant physician by means of prescriptions has enabled one, known by him to be an addict, to obtain from a pharmacist the enormous number of doses contained in 150 grains of heroin, 360 grains of morphine, and 210 grains of cocaine—three thousand ordinary doses!

"This opinion related to definitely alleged facts and must be so understood. The enormous quantity of drugs order, considered in connection with the recipient's character, without explanation, seemed enough to show prohibited sales and to exclude the idea of bona fide professional action in the ordinary course. The opinion cannot be accepted as authority for holding that a physician, who acts bona fide and according to fair medical standards, may never give an addict moderate amounts of drugs for self-administration in order to relieve conditions incident to addiction. Enforcement of the tax demands no such drastic rule, and if the act had such scope it would certainly encounter grave constitutional difficulties."

The court then proceeded:

"The Narcotic Law is essentially a revenue measure and its provisions must be reasonably applied with the primary view of enforcing the special tax. We find no facts alleged in the indictment sufficient to show that petitioner had done anything falling within definite inhibitions or sufficient materially to imperil orderly collection of revenue from sales. Federal power is delegated, and its prescribed limits must not be transcended even though the end seems desirable. The unfortunate condition of the recipient certainly created no reasonable probability that she would sell or otherwise dispose of the few tablets entrusted to her; and we cannot say that by so dispensing them the doctor necessarily transcended the limits of that professional conduct with which Congress never intended to interfere."

The decision in *Linder vs. United States*, just quoted from at some length, obviously does not give a physician free rein in the prescribing of narcotics. Section 2 of the Harrison Narcotic Act makes it unlawful for any person to sell, barter, exchange, or give away, any of the narcotic drugs covered by the act, except in pursuance of a written order of the person to whom such article is sold, bartered, exchanged, or given, on a form to be issued in blank for that purpose by the Commissioner of Internal Revenue. Then follows an exception, providing that nothing contained in the section shall apply:

"To the dispensing or distribution of any of the aforesaid drugs to a patient by a physician, dentist, or veterinary surgeon registered under this act in the course of his professional practice only. . . ."

Construing this exception, the Supreme Court of the United States said in *Jin Fuey Moy vs. United States*, 254 U. S. 189:

"Manifestly the phrases 'to a patient' and 'in the course of his professional practice only' are intended to confine the immunity of a registered physician, in dispensing the narcotic drugs mentioned in the act, strictly within the appropriate bounds of a

physician's professional practice, and not to extend it to include a sale to a dealer or a distribution intended to cater to the appetite or satisfy the craving of one addicted to the use of the drug. A 'prescription' issued for either of the latter purposes protects neither the physician who issues it nor the dealer who knowingly accepts and fills it."

As I see the situation, a physician may lawfully prescribe to relieve the acute sufferings of an addict due to the partial or total withdrawal of the drug to which he is addicted, or may even give a reasonable amount of that drug to the patient. He may not, however, supply more than is necessary to relieve the acute condition of the patient, nor, I believe, can he continue daily to supply enough to relieve such acute conditions as they arise from day to day. Nor can a physician, I believe, lawfully prescribe even to relieve the sufferings of an addict who he believes is using those sufferings for the purpose of obtaining supplies of narcotic drugs from two or more physicians. The distinction is to be drawn between prescribing or dispensing to relieve acute suffering, and prescribing or dispensing merely to cater to the appetite. If a physician prescribes or dispenses merely to cater to the appetite, he is violating the Harrison Narcotic Act; but the difficulty in these cases for the prosecuting officers to convince the jury beyond a reasonable doubt that the physician prescribed for that purpose and not for the relief of acute suffering. Of course, the prescribing or dispensing of enormous doses, or the receipt in prescribing or dispensing, would be evidence in support of such a charge.

Nothing in the Harrison Narcotic Act nor in any of the decisions based on that act has taken from the states the right to enact any legislation on the subject of narcotic addiction that is authorized under the state constitutions, provided, of course, it does not actually tend to nullify the Harrison Narcotic Act.

I have had to go at great length into this case, because otherwise it seemed impossible to convey a clear idea of the situation. It has not seemed to me desirable to take up the article in "The White Cross," which is so inaccurate and so strewn with partial statements of the truth as to convey what seems to me to be an entirely wrong idea of the situation.

Incidentally, the Harrison Narcotic Act itself is in danger, under a decision rendered by the United States Supreme Court, January 4, 1926, in *U. S. vs. Daugherty*. In that case the court said:

"The constitutionality of the Anti-Narcotic Act, touching which this court so sharply divided in *United States vs. Doremus*, 249 U. S. 86, was not raised below and has not been again considered. The doctrine approved in *Hammer vs. Dagenhart*, 247 U. S. 251; *Child Labor Tax Case*, 259 U. S. 20; *Hill vs. Wallace*, 259 U. S. 44, 67, and *Linder vs. United States*, 268 U. S. 5, may necessitate a review of that question and is hereafter properly presented."

The case included held the Child Labor Law unconstitutional and also the law involving the taxing of certain grain exchange transactions. The statement just quoted from *U. S. vs. Daugherty* is apparently a broad intimation that if the question



of the constitutionality of the Harrison Narcotic Act again comes before the court, while constituted as at present, the decision will be against its constitutionality.

Yours truly,

W. C. WOODWARD, Executive Secretary,  
Bureau of Legal Medicine and Legislation.

#### VALUE OF THE TREATMENT OF ARSPHENAMINE REACTIONS AND METALLIC POISONING BY THIOSULPHATE AND HYPOSULPHITE

During the past two years sodium thiosulphate has gained some favor in the treatment of the reactions, especially the dermatitis, from arspenamine and as an antidote in poisoning from lead, mercury and arsenic. The benefits have been generally ascribed to some chemical action of the thiosulphate which is assumed to render these agents less toxic. There is no doubt that thiosulphate can reduce mercuric chloride in the test tube to the relatively insoluble and less active calomel. However, next to nothing is known of the possible reactivity with mercury circulating in the body, and for that matter also with other metallic salts and arspenamine. Unfortunately, the form in which metallic compounds exist in the body is not known. The subject would seem, therefore, difficult of investigation from the chemical viewpoint. Speculation on the basis of unknown or doubtful chemical possibilities does not help in establishing the rationale of the thiosulphate treatment. However, attempts have been made from the pharmacological side to determine what, if any, basis for this treatment exists.

In their studies of the antagonism between thiosulphate and arsenical compounds, Kuhn and Loevenhart of the University of Wisconsin found that the intravenous injection of thiosulphate in rabbits had some protective action against the just lethal dose of sodium arsenite. The results, however, were not striking. The rate of urinary excretion of arsenic after arsenite by stomach and intravenously was markedly diminished. The amount excreted was greatly reduced despite considerable diuresis produced by the thiosulphate. Apparently there was retention of arsenic, a result that is exactly the opposite of that usually assumed. The thiosulphate reduced the therapeutic efficiency of trypanamide in experimental trypanosomiasis in rats. Kuhn and Loevenhart concluded that the thiosulphate does not mobilize arsenic, but seems to cause its transformation into a less toxic, less therapeutically efficient and less easily excretable product. On the other hand, Harrison of London reports that Dale found a 2.5 per cent solution of thiosulphate to have no deleterious influence on the action of 914, an organic arsenical used in the treatment of trypanosomiasis.

In their study of patients with dermatitis and jaundice from neoarsphenamine and acute arsenic poisoning, Kuhn and Reese of the Wisconsin Psychiatric Institute and Edgewood Arsenal found that arsenic excretion was increased after the oral administration of 2 gm. thiosulphate in 120 to 150 cc. of physiological sodium chloride solution, and also after 10 cc. of a 5 per cent solution (0.5 gm.) intra-

venously in daily doses of about 1 gm. The increased excretion was suggested to be due in part to diuresis, but apparently there is a contradiction in the excretory results of Kuhn et al. from animals and patients. The human kidney seemed to be protected against the injurious action of arsenic.

The use of thiosulphate in the mercuric chloride poisoning of dogs has been studied recently by Haskell, Henderson and Hamilton of the Virginia Medical College with completely negative results. These authors point to the great variability in the fatal dose of sublimate for dogs, a factor that may be the source of considerable error in evaluating the benefits of the treatment. In spite of early and repeated intravenous administration of thiosulphate, the average duration of life of poisoned dogs remained the same as of the controls.

The results of Haskell et al are in partial agreement with those of Hesse of the University of Breslau, who has made an extensive investigation of mercuric chloride poisoning in dogs by various agents. The only agents found by Hesse to be effective in reducing mortality from fatal dosage of the sublimate were sodium phosphite and sodium hyposulphite ( $\text{Na}_2\text{S}_2\text{O}_4$ ). Hyposulphite must not be confused with thiosulphate ( $\text{Na}_2\text{S}_2\text{O}_3$ ). The hyposulphite was especially investigated. It was effective only when given by mouth and totally inert when given intravenously or hypodermically. The reason for its inertness intravenously was the reduction of the hyposulphite in the tissues, a chemical change that probably also occurs with the thiosulphate. When given by mouth the hyposulphite came in contact with the corrosive sublimate and reduced it to calomel together with the formation of demonstrable quantities of sulphur and sulphur dioxide, and in exactly the same way as the bichloride was reduced in the test tube. That is, the hyposulphite had to be brought in direct contact with the mercuric chloride in order to be effective as an antidote. The liberation of sulphur and sulphur dioxide also occurs in water and presumably in the tissues after hypodermic administration, and, therefore, the presence of these irritating products precludes its use hypodermically. Hesse claims that the hyposulphite itself is non-toxic, 0.2 gm. daily for a week being harmless. The dose recommended by mouth for man is 1 gm. daily administered in capsules containing 0.2 gm. hyposulphite and 0.2 gm. bicarbonate. The object of the bicarbonate is for neutralization of the gastric acidity which apparently decomposes the salt. Hesse estimates that from 1.3 to 1.4 gms. hyposulphite will completely reduce 1 gm. of mercuric chloride in a 1 per cent solution. The hyposulphite may cause vomiting, which, of course, would be beneficial in removing any unreduced sublimate. However, if it is desired to avoid vomiting this can be done by the administration of morphine, and then the hyposulphite is retained and acts more effectively on the sublimate. The hyposulphite was not tried by Hesse in poisoning from lead and arsenic.

Concerning the fate of thiosulphate and hyposulphite in the body, very little is known. Both appear to be reduced in the tissues in part, at least. According to Nyiri, from 30 to 40 per cent of thiosulphite given intravenously in dogs is destroyed,

about 50 per cent when given subcutaneously, and about 30 per cent when given orally. On the other hand, Hesse was unable to find any of these salts unchanged in the urine of rabbits, the hyposulphite being excreted as sulphate. If sulphur and sulphur dioxide are liberated from the hyposulphite in the blood and tissues, as occurs in vitro, it would seem that the drug should not be used intravenously.

The lack of definite knowledge regarding the fate and behavior of the thiosulphate and hyposulphite should enjoin caution in their promiscuous use intravenously in human subjects. A rational basis for their use in the treatment of metallic poisoning does not exist; the experimental evidences are contradictory and the clinical usage is empirical and uncontrolled. The occasional clinical benefits that are reported may be due merely to diuresis, an effect that may be secured equally well by sodium sulphate and other agents. Many other agents and measures have enjoyed temporary successes in the treatment of metallic poisonings. The facts are that confirmed cases of poisoning from the metals resist all kinds of treatment and antidotes, and that no one measure is to be relied upon to the exclusion of others. Unfortunately, it is frequently forgotten that mild cases, and sometimes even severe ones, recover spontaneously without treatment. The reports on the value of thiosulphate in dermatitis from arsphenamine appear to be more consistent, and further experience will, no doubt, determine its efficiency in this condition. It should not be forgotten that the use of thiosulphate in conjunction with arsphenamine may reduce the therapeutic efficiency of the latter. Physicians, of course, may use thiosulphate and hyposulphite by mouth practically with impunity, though without complete reliance on their antidotal value.

Kuhn and Loevenhart: *J. Pharm. Exp. Therap.*, (Pro.) 1925, 25:160.

Kuhn and Reese: *J. Am. Med. Assoc.*, 1925, 85:1804.

Haskell, Henderson and Hamilton: *J. Am. Med. Assoc.*, 1925, 85:1808.

Harrison: *Lancet*, May 30, 1925, p. 1161.

Hesse: *Arch. Exp. Path. Pharm.*, 1925, 107:43.

Nyiri: *Z. ges. exptl. Med.*, 1924, 41:381.

Dennie and McBride: *J. Am. Med. Assoc.*, 1924, 83:2082.

Roberts and Hosmer: *Calif. and West. Med.*, 1925, 23:353.

Semon: *Brit. Med. J.*, 1924, 1:662.

### HEALTH NEWS AND ETHICS

"Health News," through cupidity or ignorance of its sponsors, may be quite as injurious to public welfare as the practice of the healing art by the incompetent or unscrupulous. Indeed, without access to the public press by propagandists, the practice of quackery would be quickly reduced to an inconsequential minimum. Intelligent, honest publishers whose policies include public service as well as profits, recognize their great responsibility and provide for it through national organizations with codes of ethics comparable in purposes to the "code" to which educated physicians who are members of their county, state and national medical associations subscribe.

The revised ethics of the national organization of business pledges its members to a high moral code of conduct, in its purposes again not unlike the

doctors' code. A growing number of publishers and merchants take their codes seriously and live up to their provisions, but there are still too many who disregard or openly repudiate their ethics.

In this respect publishers and merchants are not unlike doctors, whose code of ethics is the oldest in existence. It is based upon the oath of Hippocrates which in turn was devised from customs that go back to remotest antiquity. This, and all modern codes are amplifications of what we call the Golden Rule. Truth and honesty in advertising; honesty, integrity and fair dealing in business—charity, humanity, intelligent unselfishness in public and personal service. Ethics are standards of morals and manners made effective by moral force applied to those who voluntarily accept them.

Too many doctors, publishers and merchants wear their ethics only as a cloak useful in stormy weather, and even larger numbers refuse to subscribe to the ethics of their vocations and refuse, or are refused, membership in their own organizations, which have the power of discipline of their members in matters of vocational and moral conduct. Laws at their best are extensions of ethics and being universal and mandatory in their application are consequently always upon a much lower moral plane than are the ethics established by groups as expressions of their ideals and enforced by moral influence.

Few intelligent observers will question the statement that the press influences humanity en masse in health matters far more than do the doctors and other health agencies. The increasing number of publishers who are elevating their standards for health news and health advertising constitutes an encouraging sign of facilitated health progress.

### THE BUDGET OF LIFE

The most valuable item in the budget of life is the earnings in new lives, which accrue at the rate of about 1½ per cent—roughly two million babies: the most significant expenses are deaths which occur at the rate of about 1 per cent—roughly 1,250,000—annually.

Life in the United States, therefore, is still a "going concern" with its capital and its stockholders on the increase.

But this hopeful showing does not reflect the whole picture because stock in life carries with it assessment liabilities and pension or retirement privileges which must be considered before dividend rates may be established and reserves set up where moth and rust doth not corrupt nor thieves break in and steal.

Every new stockholder comes into life in debt. He has been brought in on borrowed capital and he keeps on borrowing for approximately a third of his life, the loan being secured by certain inheritances and a lot of love and faith.

During the middle third of the period of life's average of sixty years, the investor is permitted to hold his assets, he is expected to pay his debts in installments, produce other stockholders, accumulate savings, make the initial payments on their stock,



contribute to his own pension for the last third of his life and lay up reserves in the kingdom of heaven.

Love is the seal: Faith, hope, charity, the condition; peace and happiness on earth, greater rewards hereafter, the promised dividends emblazoned on life's stock certificate issued by the Keeper of Seals.

Most of our troubles and unhappiness we bring upon ourselves by hypothecating our shares for interdicted purposes and pleasures: Sometimes these precious assets are sold outright for a mess of pottage and often they are revoked before we have held them for the allotted three-score years and ten.

#### WHAT ABOUT YOUR REPRINTS?

The only permanent record of a man's usefulness to society or to his fellow-man is that which is written and published. With this part of his record eliminated, the death of the great and immortal Osler would perforce have been followed only by a brief obituary notice.

With the sanction of the Council of the California Medical Association some years ago the policy was established of inviting all members to supply the editor of CALIFORNIA AND WESTERN MEDICINE with copies of reprints of *all* articles they *published anywhere* and upon whatever subject. It was, and continued to be, the understanding of the editor that these reprints may be acknowledged in CALIFORNIA AND WESTERN MEDICINE and then filed permanently in the folder as part—the most important part—of the member's official record.

A number of members bear this wise policy in mind and supply us regularly with their reprints, and their records are consequently the most complete ones in the files. Others have neglected to do this and consequently, as happens quite frequently, when a prominent member dies his official record, which ought to be complete in every respect, contains unsatisfactory data upon which to base a well-merited story customary under such circumstances.

The Los Angeles County Medical Golf Association has been formed with officers as follows: President, W. H. Kiger; secretary and treasurer, C. H. Weaver; chairman membership committee, Clarence Toland; chairman tournament committee, Stanley Granger, F. A. Rhodes, W. Dye, J. Vruwink, G. Piness; chairman rules committee, E. R. Lewis; chairman publicity committee, H. Shoemaker. Initiation fee, \$3. Founder members include: W. D. Brownfield, A. A. Blatherwick, J. W. Crossan, W. Dye, A. S. Granger, W. L. Haworth, A. R. Irvine, Isaac Jones, W. H. Kiger, E. R. Lewis, L. B. Morton, George Piness, F. A. Rhodes, Harlan Shoemaker, Howard Taylor, Clarence Toland, John Vruwink, Homer M. Walker, Chalmer H. Weaver. Tournaments are to be played on handicaps in the various golf clubs around Los Angeles and in southern California.

The purpose of the Southern County Medical Golf Association is to promote friendship and good fellowship among the many golfing physicians. Trophies will be awarded by the tournament committee in the various tournaments. Requirement for membership is that the applicant be a member, in good standing, of his County Medical Association. Those desiring membership should forward their check for \$3 to the secretary-treasurer, C. H. Weaver, 2007 Wilshire boulevard, at their earliest convenience.

Officers of this club were in San Francisco recently looking for representatives of the Northern California Medical Golfers Club, with a view to arranging tournaments in connection with the 1926 California Medical Association session to be held in Oakland April 26-May 1.

**Protest the Sheppard-Towner Act**—The Sheppard-Towner Act will continue in force two additional years—until June 30, 1929—if two bills\* introduced into Congress to accomplish that end are permitted to become law. Otherwise, the act will expire by a self-contained limitation, June 30, 1927. The proposed continuance of federal domination over health matters in which the state is constitutionally supreme is in itself pernicious. The proposal is, moreover, astutely timed to force on Congress at the very threshold of the next presidential campaign the question of making the system permanent. It will be remembered that the original proposal was also incorporated as a plank in the platforms of both leading political parties. The proponents of the Sheppard-Towner scheme are apt to brush aside facts and figures by an emotional appeal on behalf of mothers and babies. Any discussion of the scheme in the days immediately preceding a presidential campaign is certain to be complicated further by considerations of political expediency, arising out of the question as to who is going to deliver the women's vote, and where. The act became a law five years ago. Millions of dollars of federal and state moneys have been spent to enable its supporters to establish its merits. Who will say that the evidence submitted indicates that they have done so? Their present plea for the continuance of the scheme for only two years may well be construed as an admission that they have found nothing in the evidence that would justify them in asking for enactment of the procedure on a more lasting basis. The Sheppard-Towner Act has been condemned unreservedly by the House of Delegates of the American Medical Association. The pending bills to continue the act in effect are clearly within the ban of such condemnation. Now is the time to protest against their enactment. The committee on interstate and foreign commerce, House of Representatives, to which the house bill has been referred, at the present writing has not made its report. Even after it does so, the bill must be acted on by the house. The senate bill is still to be acted on by the senate committee on education and labor, and by the senate. If the senate and the house agree on a measure, it will still have to be approved by the President. State associations and county societies, and the physicians of the country generally, should immediately telegraph or write to the President and to their senators and representatives protesting against the enactment of these bills.—Journal A. M. A., Feb. 6, 1926.

\* S. 2696—A bill to extend the provisions of section 2 of the act entitled "An act for the promotion of the welfare and hygiene of maternity and infancy, and for other purposes," H. R. 7555, a bill to authorize for the fiscal years ending June 30, 1928, and June 30, 1929, appropriations for carrying out the provisions of the Act entitled "An act for the promotion of the welfare and hygiene of maternity and infancy, and for other purposes," approved November 23, 1921.

In the near future the profession must meet the question of State Medicine as it presents itself under various guises and disguises. We must meet the problem of our relations with hospitals, dispensaries, medical charities, and social service organizations, some of which exhibit a tendency to completely dominate situations vitally affecting the medical profession. We must be prepared to meet with these groups as equals, ready to accept what is good but able to reject what is bad. Integrity of purpose, supported by the strength to make this purpose effective, must be our reliance for the future.—A. J. Skeel (Cleveland, Ohio, State Medical Journal, Feb. 1, 1926).

"Oculists spend their lives trying to make people see more truly, better, with a greater percentage of perfect vision.

"A lot of other people spend their lives trying to make people see things as they are not, to deceive their eyes, to deceive their power of vision.

"It's a curious world!

"And the most curious thing in it is vision; eyesight, for all the mystery of the optic nerve and the retina, is a simple thing, compared to the act of vision, which is a product of eyesight plus brains, plus imagination, plus education, plus habit of mind, plus training and plus or minus glasses."—Medical Standard.

## - The MONTH with the EDITOR -

Notes, reflections, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

Two years' work under the Sheppard-Towner Law shows that for the millions of dollars of taxes expended in carrying out its provisions the people purchased:

- 26,353 child health conferences;
- 594,136 babies examined;
- 9,669 prenatal conferences held;
- 74,659 mothers advised;
- 1,706 infant welfare stations established;
- 245 prenatal centers established;
- 39,910 midwives instructed;
- 162,073 mothers attending mothers' classes;
- 5,476 little mothers' classes organized.

Aside from the intelligent medical service included here, which was largely *donated* by doctors, the figures are not conducive to enthusiasm.

The encouragement, impetus and added strength these bureaucrats have given to the practice of medicine by midwives ought to cause them to blush for shame.

Privacy is the sweetest element in liberty, it is the highest fruitage of civilization, its worth unknown until it becomes difficult or lost. When the life of the plain people becomes public, a nation is on the decline. Life is mostly a thing of recesses and retirements. There is no such thing, ultimately, as a "public character," except it be The Almighty. We are all private characters. But when the pressure of curiosity or exploitation begins to be felt on our privacy, a feeling of beleaguement ensues which leads to protective measures.—Dear-born Independent.

Birth controllers may view with glee the essays now appearing in periodical literature pointing out the prohibitive costs of babies. It's a sad song as it is being sung, but the singers would elevate the quality of their music if they would compare the cost of babies with the costs of their avoidance rather than with the cost of motor cars.

One recent writer, after painfully building up the costs of birth and early care of a baby to some \$500 and placing the blame therefor upon those who serve, and offering these excessive costs as the reason there were only 1,792,646 births recorded in the United States in 1923, shows in the same paragraph that 3,637,216 passenger automobiles were sold during the same year.

Now there is logic and consistency for you to the nth degree. Who in this day would think of assuming the responsibilities, duties and pleasures of parenthood when for only a few more dollars they can purchase a motor car?

Our statisticians, who salve their consciences with their budget making, are careful to swell the costs of birth by adding the costs of after-care of mother and baby, but they compare these costs with the naked motor car without anything for extras or upkeep, even then there does not appear to be any defensible reason why people who pay for nearly four million motor cars cannot pay for half that number of babies at a quarter of the price.

Babies *are* expensive, but if the luxuries demanded by society are eliminated and only essentials considered, the increase in cost has not kept pace with increase in the cost of potatoes, clothing or shoes. Even at the present prices, producing babies is the least expensive end result of sexual indulgence, except for the itinerant polygamist who accepts his pleasures where he finds them and never mind the consequences. Even he or she certainly pays more in the long run than all the costs of decent, legalized monogamous sexual indulgence and its normal products. Practitioners of contraception and abortiception don't work for nothing. Some of their fees are said to rival those of the most soulless obstetricians. Then there is the question of dangers to health and life. More illness and more deaths are traceable to contra- and aborticeptionists

than are incident to normal child-birth, and they are more expensive financially and otherwise.

Moral: Many budget makers and social economists are stupid asses or astute propagandists.

"Yesterday's mail," writes one of our correspondents, "brought me an amazing item. No less an institution than the California Institute of Technology, Pasadena, endowed partly by the late Dr. Norman Bridge and directed by R. H. Millikan, Ph. D., Sc. D., LL. D., Nobel Laureate in Physics, employs an osteopath as 'Physician to the Football Team' (p. 176 of catalog for 1925). On p. 21, Floyd L. Hanes, D. O., is listed as a 'D. O.' College of Osteopathic Physicians and Surgeons, Los Angeles, among the staff of instruction and research. How can we blame the poor public for lack of discrimination in the light of endorsement such as this one by super-scientists to youthful and inexperienced though receptive minds?"

A California actress also recently left an endowment designed to cripple as much as possible scientific methods of progress in the prevention and treatment of diseases of man and animals. California is young and will outgrow some of the things now considered important. After all, osteopaths ought to be strong for physics.

That vaccination always completely protects a person against smallpox is no more debatable than that two times two equals four. All intelligent persons accept this fact and yet intelligent persons do sometimes contract smallpox. A lot of them are doing so now in California.

How can we explain it? Certainly they don't need more education. Even morons, that the psychologists tell us constitute a large percentage of our population, ought to be able to appreciate and apply so simple and certain a preventive as is vaccination. What ought we to do about it? Shall the law be enforced and people protected against themselves by force, or should we permit them to do as they please? *The smallpox patient is absolutely harmless in a vaccinated community.* He is not as dangerous as are many other classes of sick people whom we do not disturb. So why disturb him, ask a growing number of writers.

It is a fact that most people who are "conscientious objectors" to vaccination are also objectors to interference with other more essential and more serious dangers. With this as a text, some writers frankly recommend suspension of the law, allowing smallpox to take its toll and remove such people from the community. Too cold-blooded to endorse, to be sure, but should we spend huge sums in attempting to enforce vaccination as a matter of public protection where personal protection is so simple and so inexpensive? What would happen if we stopped trying to enforce vaccination and permit an individual to have his smallpox and to convey it to others of the small anti-vaccination element of the community? In theory such philosophy is not easy to refute, but actually in the few places where such policies were put into operation, and no more attention paid to smallpox than to stomachache, these alleged non-believers made an awful howl.

At least we must do all we can to protect by vaccination as near 100 per cent of our *children* as possible. They can't think for themselves and to allow a child, or other incompetent citizen to get smallpox ought to be followed by a manslaughter charge against someone. As for adult unbelievers, that's their business and so are the consequences.

The lengthening light of Osler's Influence on medicine gains new brilliance in the second edition of his system of Modern Medicine, edited by Thomas McCrae, now coming from the presses of Lea & Febiger.

Encyclopedic treatises on medicine are largely being



replaced by more numerous and smaller books, monographic in character. This is well. But every doctor needs at least one "system" of medicine handy on his office shelves. Osler's *Modern Medicine* supplies this need as does no other publication with which we are familiar.

"The real original causes of all chronic diseases; which, though they have been multiplied without end, and numberless causes been assigned them, are certainly not many, and their first causes very few. I think they may very fairly be reduced to these three: Indolence, Intemperance, and Vexation."

Doctor William Cadogan said this in his "Dissertation on Gout" about two hundred years ago. Others said it hundreds of years before he did and still others are quoting it on the front page of newspapers today as a new and remarkable discovery.

By the way, doctor, if you have not read Cadogan's "dissertation" with an introduction by Doctor Ruhräh, published recently, you have missed a delicious treat.

Only three of the 1650 persons examined at the "Periodic Health Examination" clinic of the New York Health Board, were found free from "appreciable physical defects."

Another group found *none* free from physical defects in several thousand examined.

Hi: "Gee, but she's a beaut!" enthusiastically pointing to his new car.

Girl: "Why do you allude to the car as 'she,' Hi?"

Hi: "Because it has beautiful curves, is not altogether trustworthy, and keeps its owner broke."

"I have never known a thinking man who did not believe in God."—Robert A. Millikan (*Collier's*).

The Editor of McClure's Magazine appears surprised, not to say peeved, at the reaction produced by an article his magazine published last May on "New Successes in Treating Deafness." The letters of "approval" and "ardent confirmation" following the publication evidently pleased the editor, but those from educated physicians evidently proved disturbing. The editor (February issue) now says that "We sought the opinion of every registered osteopathic physician in the United States and Europe; nearly all responded and we found that Muncie and his method had the approval of between 97 and 98 per cent of these confreres."

Nevertheless, the editor seems unhappy and even resentful that letters from medical men should "condemn" and "reject" Muncie and his method. The editor considers that the "two published verdicts against him (Muncie) came from medical sources."

Apparently even some of the osteopaths objected to the publicity given to Muncie, which the editor of McClure's answers by this gem:

"But if men are dying of thirst in the desert are you going to forbid another to point out the water-hole because that would be giving publicity to Jenkins, its owner? Publicity for Doctor Muncie was an inevitable incident of publicity for a piece of extraordinary news for the deaf."

Note—McClure's has ceased publication.

"The Trend of Veterans' Relief Legislation: State Medicine," is the title of an illuminating editorial (*Jour. A. M. A.*, Jan. 23) that ought to have the serious attention of physicians, not so much in their own interests as in that of human welfare in general. CALIFORNIA AND WESTERN MEDICINE has repeatedly called attention to the dangers inherent in this "trend" which is so fully exposed in this longer communication.

From apparently reliable sources we are informed that the number of proprietary (patent) remedies for sale has increased during the last thirty years from less than 1000 to over 60,000.

These industries are said to support one-twelfth of all advertising. The annual sales of "patent" medicines exceed \$275,000,000, or more than twice as much as is paid for drugs ordered by doctors. Both the number of cures and their costs are increasing very rapidly which,

of course, signifies that sick people, or those who think they are sick, are increasing in numbers and that in spite of all of our "health education"—or is it because of the "education"—more and more people are diagnosing and treating their own illnesses, at least during the stage when intelligent medical advice would have the greatest value.

According to the Public Press:

—An "Herb Physician" who, according to his advertisements carried by some California newspapers, is practicing medicine—seemingly illegally—is seeking patients through what he terms "educational articles." His "education" consists among other things in this:

"The heart is red like the sun. It controls the circulation of the blood of the body. The natural color of the fire element is also red; therefore, the heart is classified under the fire element of the body. When the five principal elements are working with equal balance and power, the heart is free from disease."

—When well and strong and feeling fine we seldom think about doctors, and if we do it is generally with the comforting thought that medical science has conquered almost everything but cancer.

But let us catch a common cold and fail to shake it off in a day and we set to thinking of the thousands of years in which the millions of medical men have failed to find a speedy cure for so simple a malady.

To which the profession replies that it is not a simple and may prove a very serious malady if not taken in time and that the best way to take it is to take the best advice. It is not what the doctor does not know but what the patient thinks he knows himself that is the danger in a common cold. A man with a cold is a sick man and may become sicker if he neglects it.—Editorial, *San Francisco Bulletin*.

—Do you sleep "efficiently"? Sleep is largely a bad habit which causes us to waste time in unconsciousness that might be devoted to work or play. Socrates said it, Edison endorsed it, and certain modern scientists have recently "proved" it, or at least that is what the press gets out of their claims.

Sleep is a "form of intoxication," so it is said, and as evidence offered in support of this claim, it is related that a drunkard sleeps and as a rule he wakes detoxified. Paradoxes mean little when science must be popularized. The scientists did conclude that:

"The intoxication which leads to sleep is caused evidently by an excess of toxins or poisons produced by muscular and nerve exertion. They are thrown off when the body and mind are at rest, and complete rest is achieved through sleep."

The difficulty of harmonizing this theory with the well-known fact that some of the most active people give least time to sleeping was overcome by concluding:

"It is not so much how long we sleep, as how fast our sleep mechanisms work while we are asleep. In short, sleep has not only length but depth. If this assumption be true, the length of time that people sleep is very largely a habit. It might be possible to cause their sleep mechanism to work faster, just as by a series of reflexes we can make the salivary glands work faster."

As a matter of fact, the work of these investigators was conscientious and probably has scientific value, but in attempts to popularize and dramatize their studies as news, delicious material for the funny page has been produced.

—"It is just as natural to die as to be born," writes Doctor W. W. Keen (*McClure's*, February), in opening his discussion of man's triple life (not three lives, but three phases of one life) which he illustrates with this diagram:

The	B	The	D	The
	I		E	Spiritual
Prenatal	R	Earthly	A	or
	T		T	Disembodied
Life	II	Life	H	Life

From this text our distinguished colleague delivers an entrancing birthday sermon. Doctor Keen was 89 years old on January 19, 1926.

—Figures made public by the Community Chest of San Francisco estimating the cost of child raising to be from \$25 to \$37 per month and said "to embrace everything a child could need or want 'without extravagance,'" are interesting if true.

The report allocates these costs as: "Subsistence, \$12; clothing, \$5.40; *medical attention, 50 cents*; housing, \$7; education when public schools are used, 10 cents; administration, salaries and overhead, \$12."

Other estimates more reliable than these show that with their time given to charity, figured even at the wages of skilled artisans, the doctors of San Francisco alone, to say nothing of other health agencies, contribute well over two million dollars to the health of the poor annually. Certainly more than 12 cents a month of this service is justly chargeable to the cost of raising children.

—"Spank the Mother and Save the Child" was the main heading of one "boilerplate" page in the Sunday supplements recently. This page, or at least that part of it not occupied by the picture of the "noted psychiatrist" author and the usual type of cartoons, was given over largely to a collection of the usual headline type of meaningless and stupid platitudes.

Charlatans do this sort of thing better, but they usually pay for their space.

—When county and municipal governments go into the hospital business for pay in competition with other hospitals their troubles begin. This appears to be at least one of the causes of the troubles of the new San Mateo County Hospital recently featured in the public press.

It seems that patients able to pay—something at least—went to the county hospital because the charges were so low that they could not be met by hospitals that have no subsidy from tax money to absorb their losses. After contracting debts aggregating some \$75,000 the patients refused to pay, and so the superintendent's resignation was requested. Said the superintendent in submitting her resignation:

"It was my failure to be a good politician that proved my undoing."

—An actress wrote George Bernard Shaw: "I am reputed to be one of the most beautiful women in the world, and you have one of the most brilliant brains. Can't we start a race of our own?"

"My son," Shaw replied, "would doubtless inherit his looks from me and his brains from you, so the experiment would be a failure."

—Some California newspapers are selling space to some disgustingly wild claims of people who are labeled "Herb Physicians." One of these "Herb Physicians" states openly, "No matter how chronic and how stubborn your case is and how many physicians have failed, *come and see us for effective treatment.*" (Italics ours.)

Here is the published offer to do what the law specifically prescribes may be done only by those licensed by the state to practice medicine.

—Dear Old Doctor Lorenz found it harder, on his recent trip to our country "to see his old patients," to get his publicity stuff into the news columns. Some papers, it is said, advised his representatives to see the advertising department.

However, by promulgating the old axiom that the "good die young" and elaborating it into detailed claims of how excess of virtue is killing Americans, he succeeded in interesting editors.

Funny world, isn't it?

#### California, Nevada, and Utah Doctors Publish Elsewhere:

[Note—Members of the California, Nevada, and Utah Medical Associations are invited to supply the editor with reprints or marked copies of magazines containing their articles or very brief abstracts. All that we receive will be noted regularly in this space.—Editor.]

—Samuel A. Durr (Am. Jour. Apoth., 9, 1, p. 66) discusses "Modified Tendon Tucking." The author's tuck is made as usual, its base being slightly farther back from the tendinous insertion than the height of the tuck itself. It is then secured by a catgut suture at each edge, embracing less than one-third of the tendon. Two heavy silk sutures are now placed as in Reese's advancement operation. Each goes from without inwards, through the con-

junctiva and tuck, at the junction of the middle and outer third, and back from within outward, near the edge of the tuck. The suture is tied on the outside, and reintroduced behind this stitch, through the tucked tendon. It is then inserted through the scleral attachment of the tendon, picking up some of the scleral fibres, and on through the conjunctiva anteriorly. The two ends of each suture are now tied, giving the same result as in a resection. By introducing the scleral suture anterior to the tendinous insertion, the result would resemble an advancement. The advantages claimed by the author for his modification of the tuck are security against slipping and a much neater appearance following operation.

—F. M. Pottenger, Monrovia, California, "Some Observations on Inherited Physical and Psychical Characteristics in Tuberculous Patients," M. J. & Record (Jan. 6), 1926.

—Albert H. Rowe, Oakland, California, "Bronchial Asthma in Children and in Young Adults," J. of Dis. Child. (January), 1926.

—H. L. Langnecker, San Francisco, "The Importance of Postural Guidance in the Very Young," California State Board of Health, Bureau of Child Hygiene.

—W. D. Sansum, N. R. Blatherwick and Ruth Bowden, Santa Barbara, "High Carbohydrate Diets in Diabetes Mellitus," J. A. M. A. (January 16), 1926.

—Harold Brunn, San Francisco, "Primary Carcinoma of the Lung: Report of Two Operative Cases," Arch Surg. (January), 1926.

—Zach B. Coblenz, Santa Maria, California, "A Case of Cysticercus of the Skin," J. A. M. A. (October), 1925.

California and Western Medicine has Accepted for publication, in addition to the list last published, the following essays, which will be published in due course of time, as space is available:

James P. Kerby, Salt Lake City, "Anomalies, Diseases and Injuries of the Spine."

Edward Jackson, Denver, Colo., "Care of the Eyes in Middle and Later Life." (This essay was presented at the annual session of the Utah Medical Association.)

L. L. Stanley, San Rafael, Calif., "How Men Die in Prison."

Peter Frandsen, Reno, Nevada, "Anti-Scientific Propaganda."

David Causey, Princeton University, N. J., "Eimeria Butkai N. S. P., a New Coccidian from Man."

Joseph W. Cook, Banning, Calif., "Tuberculosis."

The Dallas Session—Barbecue for Doctors—Typical Texas entertainment is planned for the Annual Session of the American Medical Association, which will convene in Dallas, Texas, April 19-23. A barbecue tendered by Dr. John H. Dean for the 5,000 physicians, guests and exhibitors, totaling more than 10,000 visitors to the Lone-Star State, is an unusual feature planned for this occasion. Eminent physicians will witness carving under the supervision of Mr. Max Hahn, for forty years expert "barbecuer" of Dallas.

Last June, Dr. Dean selected eighty cows with calves about 6 weeks old out of a herd of 4000. These cows were selected according to size, vigor and milk producing qualities, so as to insure a rapid, healthy growth for each calf. The eighty cows and calves were turned into a six-section pasture which had not been used, and which contained an abundance of fresh food and water, assuring the cattle of a properly selected, scientific diet. It is customary to wean calves from the mother after six months, but this plan was not followed with the calves to be used for the barbecue, in order that they might secure their mother's milk, so as to provide the best nourishment for rapid, healthful growth. A full diet was begun for the cattle in December. The calves will be killed in advance of the session and the meat prepared so as to be in the best condition for the barbecue. Mr. Tony Bazar, with a corps of able assistants, has been delegated to arrange for the service during the barbecue.

"The only thing that can keep on growing without nourishment is an ego."—Fresno Republican.



## Medical Economics and Public Health

Continuation of the activities of the Sheppard-Towner law are dependent upon appropriations that must be made by this Congress.

Its advocates are having a hard time arousing interest among themselves, much less for the active lobbying that will be required to induce Congress to extend this innovation.

An active publicity proponent of this most criticized of all the fifty-fifty laws voices its discouragement in connection with a much advertised and heralded statewide conference held recently in Los Angeles of all that formerly had been interested in the Sheppard-Towner law. "The program," says this periodical, "was very enlightening but the attendance so small as to apparently justify the conclusion that there are no women in California interested in child welfare." Of course women, and men as well, are keenly interested in child welfare, but this interest need not be expressed through a political bureau of the Department of Labor at Washington.

A promising study is being carried out by Dr. V. H. Podstata and associates at THE ROSE AVENUE COTTAGES for the study and re-education of unusual children, at Pleasanton, California.

"Rose Avenue Cottages" was formerly a beautiful summer residence with attractive buildings, grounds and lawns. It has been converted into a promising personality service for those children from 6 to 12 years of age who belong to the group aptly termed "unusual" by Doctor Podstata.

Permanently subnormal children and those over 12 or under 6 are not accepted except temporarily for purposes of diagnosis.

"The 'unusual' child," says Doctor Podstata in his recently issued report, "is essentially a pre-psychotic or a pre-criminal child. In certain cases the psychosis is already in evidence when we receive the child. (So-called constitutional depressions, elations, shut-in personality, hysterical reactions, etc.) Also the varying mixture of traits and reactions that we term 'psychopathy' may be present. Fortunately, the time is past when all these deviations were discussed under the term 'degeneracy'."

"The majority of the children exhibit a sensitive nervous organization, failing to adjust themselves to difficult surroundings. A certain proportion of these cases show an insufficient capacity and plasticity of the nervous organization. Generally, however, the surroundings have been largely to blame."

"Our primary aim," continues the report, "naturally is the search for the cause or causes of the existing deviation. To systematize this search we assume that these may be found upon one or more of the following levels:

"1. The developmental, largely the lack of potential vitality imparted to the uniting parental cells.

"2. The structural, meaning the development, organization, and structural integrity of nerve tissue impaired by trauma or disease.

"3. The toxic, endogenous or exogenous, producing little if any structural change, but interfering with normal functions of the nervous system.

"4. The endocrine, especially the thyroid, pituitary and gonad, which primarily, or as a result of other impairments (toxic, emotional, etc.), cause certain deviation in normal capacity of response of nerve tissue.

"5. The psychic, dividing these into:

(a) Largely environmental, with reality too difficult for adjustment (faulty home and school atmosphere and influence, etc.).

(b) Largely personal, meaning abnormal basic tone of feeling, undigested experiences, actual mental traumas, conflicts and problems.

"Even the small group of cases covered in the report has demonstrated the need of this large scope of enquiry. It has been shown, however, that no matter how large a part is played by the 'physical' elements, there never fail to appear mental reactions based upon, or, better stated, compensating for such an impairment. In other words, always the individual reacts as a whole.

"Of necessity the treatment at Rose Avenue Cottages covers more than one level of impairment, but in no case can the large mental element be ignored.

"Every care is taken to create true family atmosphere and to avoid institutional routine. The very success of this effort emphasizes the need of limitation of the number of children who are accepted for care.

"With the exception of two boys (fourteen and fifteen years old), every child admitted to Rose Avenue Cottages has been benefited, some of them remarkably so. The

two exceptions sustain the decision not to accept children over 12 years of age. The success attained with children declared impossible (with one exception) both at home and in school is very encouraging. The stealing, running away and other serious problems, in most cases, disappeared soon after admission.

"Rose Avenue Cottages has not the finances sufficient to warrant extending its services to those who cannot pay something. On the other hand, there is no intention of converting the cottages into a profit-bearing institution."

Under the same able medical management that conducts the nearby Livermore Sanitarium, scientific reports of value may be anticipated and methods of intelligent service to an important group of children may be established.

The poor man of "middle age": One prominent and widely quoted writer recently emphasized the point that the reason Ponce de Leon did not find the fountain of youth was that he started his search too late in life. That is said to have been the principal cause of failure of others searching for youth's fountains.

There seems to be some disagreement among "savants" as to the exact age when one must go looking for that Pierian spring. Most of them agree that old age is too late. Some say that "middle life" is about the right time, but others believe the search should start with adolescence.

A prominent physician has said that the best way he knew to fail in promoting or preserving health was to try to follow as much as possible of the "free medical advice" now being issued everywhere in every way by everybody except those prepared by education and experience to give medical advice.

Lewellys Barker says, get a hobby—get two hobbies—get the hobby of your choice and then ride. To which may be added—avoid the free health advice that pugilists, movie actresses, "savants" and other bubbling emotionalists who are so energetically dispensing froth for substance in health matters.

Health officers receive appointment: According to the Bulletin of California Board of Health, W. F. Mosher, M. D., and a member of the California Medical Association, has been appointed city health officer of Holtville to succeed Mr. Dale C. Cooper.

Harry F. Smith, M. D., has been appointed city health officer of Piedmont, to succeed Arthur Fibush, M. D. Both members of the California Medical Association.

Warren F. Fox, M. D., has been appointed city health officer of Pasadena to succeed Frank W. Hodgdon Jr., M. D., who has served in that capacity for many years. Doctor Fox's term of office began January 1, 1926. Doctor Hodgdon is a member of the California Medical Association.

"A new field is opening for the physician," relate speakers upon this subject (Virginia M. Monthly). "I venture to predict that in the future, all intelligent men and women will have their own health physician to whom they will look to keep them well and vigorous. This will not come until the public recognizes the fact that the physician can adequately give this service. To hasten the day and to insure its coming, we shall be wise to address ourselves to the task of becoming as efficient and successful in this field as in the field of prevention of communicable illness and the cure of disease." . . .

The American Optical Company has withdrawn their advertising support and co-operation through CALIFORNIA AND WESTERN MEDICINE with the physicians of California, Nevada and Utah because "intensive advertising in other fields will not permit" them to continue their former methods of appeal.

In answer to our members who have made enquiry regarding the reasons for this change of policy of the American Optical Company, we can only state the reason they gave in the above quotation, because that is all we have been supplied with.

Ennion G. Williams, M. D., Health Commissioner of Virginia, in discussing the reorganization of the Virginia Public Health Service, makes such commendable statements as:

"Public health authorities have kept before them the idea that the work must be carried on for the whole people, or the public, and not for individuals. The view-

point of the health officer, whose duty is to protect the public, is in marked contrast to that of the practitioner of medicine, whose duty is to the individual. It is also in marked contrast to the charity or welfare worker, who administers to the relief of the individual poor." . . .

"Public health duties include the education of the public as to a knowledge of the cause of diseases and methods to prevent them . . . the supervision of such utilities as water supplies and sewage disposal, and the abatement of nuisances dangerous to the public health. . . . Control of communicable diseases, including the collection of reports of cases, aid in diagnosis, epidemiological study of the cases and the institution of measures for control." . . .

"Other states make urinalyses and pathological examinations of tissues, but we have interpreted these examinations as not being within the legitimate boundary of public health activities." . . .

"There is a question as to the extent to which the government should go on looking after the physical condition of children. It can at least see that the environment is what it should be and furnish those that make the inspections, leaving the corrections to the parents or guardians. The correctional work should only be carried on by the government because of the inability of the parents to do so. In the use of the word government, I refer to national, state, or local."

Physical therapeutics is the new title of a magazine formerly issued by The Williams & Wilkins Company of Baltimore under the name of the American Journal of Electro-Therapeutics and Radiology.

"As one result of the desirability of periodic examination," says Boston M. & S. J. editorially, "numerous commercial 'clinics' and 'institutes' have sprung up, bearing with them the suggestion that it is only through such organizations that a thorough 'stocktaking' can be had, since it is beyond the ability of any one physician to carry out an examination which will detect any and all signs of incipient disease." . . . "The fundamental objection to the commercial clinics is that they operate to destroy the confidence between patient and physician which is essential if the former is to obtain the best kind of medical care." . . . "If periodic health examinations are to result in benefit to individuals, they must be made by one who individualizes, not by an organization that tends to mechanize the process. . . .

"If health clinics and commercial institutes are to justify their existence by serving the best interests of their members they must realize that this can be done only by co-operating with the family physician, not by endeavoring to supplant him. . . .

"If the family physician is not qualified the remedy lies not in superseding him, but in altering our system of medical education so that it shall give him these qualifications."

Dr. Harry Alderson recently forwarded us some mail that describes another cure-all for the inhabitants of the land of Moronia.

The device, which is said to be so helpful to doctors, appears to be a sort of automatic chiropractic thruster operated by electricity. The advertising is of the usual testimonial variety, the testimonials claiming to be from doctors of medicine as well as a variety of cultists.

Among other amazing claims is one said to be from a doctor indorsing the value of this percussion hammer on the seventh cervical vertebra in the treatment of aneurism.

A naturopath is quoted as saying that this up and down motion riveting hammer is particularly successful in eliciting the "spinal heart reflex of stimulation!" A chiropractor finds it "helpful in relaxing the spinal muscles before adjustments!!" A kinesipath, whatever that is, has used the hammer on "a case of fracture of the humerus with distinct benefit!!!"

"Dr. ——— Chiro." finds "it particularly valuable in treating female troubles." "Its penetrating powers are stimulating!!!"

"J. M. Ray, M.D." claims "marked success" with this device in treating "patients in Rockwood Old People's Home," etc., etc.

In their letter about this machine its promoters state:

"Because of the remarkable results obtained by its use in this way we have coined the phrase 'surge treatment,' and because of its resemblance to a wash machine in its method and effects, the to and fro action in the tissues cleanses them of the acid impurities and at the same time stimulates the local circulation, both of which as you know are essential to a healthy condition."

Disgusting you say. Of course, but do you know that this thing is manufactured in California, advertised through the mails and sold openly?

The Sutter Hospital of Sacramento is supplying interested friends with an attractive and useful annual report. They have departed from the old-time stereotyped method of report that was about as interesting reading as a census or weather bureau report. It is in narrative form, illustrated, and tells of growth and progress that reflects credit upon the management and ought to be a source of comfort and pride to the people of Sacramento.

The hospital gives mothers a parchment birth certificate bearing a drawing of the hospital and the certification of the birth of the baby signed by the attending physician and the superintendent and bearing the seal of the hospital. Over 500 such certificates were issued last year.

That is service that counts in the campaign to lower maternal hazards and infant mortality, made available to the people of Sacramento by the industry, leadership and teamwork of the doctors and their friends who financed and are conducting this splendid hospital exclusively as an ethical agency of scientific medicine.

The passing of Jacob Bausch is a matter of interest to physicians and all who use microscopes. Bausch died recently at his home in Rochester, New York, at the age of 95. He was president and founder of the Bausch & Lomb Optical Company:

"As a poor immigrant boy he borrowed \$60 from Henry Lomb and launched upon a business career which won him world-wide recognition. Lomb died in 1908."

"Some of our medical concepts may have to undergo revision," says Hugh S. Cumming (Virginia M. Monthly). "Even words may play an important role in popularizing periodic examinations for already we note a tendency to refer to the physician as 'health counsellor' and the patient as 'health client,'" relate speakers upon the subject.

We are still too much inclined to place disease and health in distinct categories, and yet how well we know that the line of demarcation is imperceptible. Our knowledge is scantiest where the two appear to merge and for that reason we may look for new light and significant facts as more and more people, presumably well, are brought under the scrutinizing eye of the physician trained to detect danger signals. A solemn scientific duty will rest upon the examining physician to keep accurate records, to note all of the facts in the clinical or pre-clinical picture.

For your convenience, C. H. Hittenberger Co., Surgical Appliances, have opened a branch store at 460 Post street, San Francisco, where you will find perfectly appointed and finely equipped rooms for privacy, where your patients will receive competent and courteous attention at all times. Their announcements are found monthly in our advertising pages.

Most people no doubt have forgotten the spectacular free advertising an osteopath received in the news columns a short time ago because of his alleged call to Spain to cure the defective hearing of Prince Don Jaime, son of the king.

The story was a plausible one to morons; it made the osteopath "famous" over night, and it gave him an opportunity to cash in on hundreds of thousands of dollars worth of free advertising. Investigators have later found that the prince is still deaf.

Nevertheless, a magazine of national circulation and a certain amount of prestige, smeared its pages with a salesmanship story that rivaled those of the average circulars and claims of goat gland vendors.

We don't know what has become of the osteopath. With so much free advertising he ought to have been able to clean up and retire. The most interesting feature



of the story is contained in the swan song issue of McClure's magazine which ceased publication with the February issue. In this last issue is a snarl at those who had criticized the accuracy, judgment and taste of the magazine in its previous exploitation of a man who claimed to cure deafness by "operative, constructive finger surgery."

Thus endeth another chapter.

California and Western Medicine (February, 1926, p. 241) quoted rather fully from the sordid story of the actions of a couple of itinerant quacks whose victims were people with "eye trouble."

These "specialists" were arrested and pleaded guilty. What happened may be inferred from the following letter from the Board of Medical Examiners to the District Attorney of Fresno County:

"This will acknowledge the communication sent us signed N. Evinger, clerk, relating that a plea of guilty was accepted from both Faircloth and Gebhardt, each thereafter having been fined \$600 and given six months suspended sentence.

"Considering the numerous complaints that have come to us throughout the State of California regarding similar operations of two individuals who have made a practice of swindling unsophisticated elderly people of means, it is too bad that an example was not made of Faircloth and Gebhardt and both sent to jail."

Signed: C. B. PINKHAM, Secretary.

## Medical, Health and Health Agency News

The monthly meeting of the Staff of Hollywood Hospital was held in the assembly room on Tuesday, January 26. The meeting was well attended, there being about 120 members present. The subject for the evening was "Drainage in Infections of the Gall-bladder, Liver, Bile Ducts and Pancreas." A. S. Lobingier was the chief speaker, his talk being illustrated with lantern slides. George Dock led the discussion, followed by William Dashiell, C. F. Nelson, F. K. Collins, J. B. Williams, and H. G. Marxmiller.

San Diego County General Hospital's Medical Staff, writes Robert Pollock, have elected the following officers for 1926: President, C. E. Howard; vice-president, W. O. Weiskotten; secretary, Martha Welpton. The election followed at the close of a very excellent clinical program. It is rare that one is privileged to witness such generous discussion as was given the cases presented. The writer is firmly impressed with the belief that if those attending staff meetings and medical societies simply let themselves go and expressed as vigorously and pertinently their views on cases presented as they are apt to do after they leave the meeting, very much would be gained for the advance of medicine as a whole.

The Medical Staff of the Scripps Memorial Hospital recently elected the following officers for 1926: President, H. C. Oatman; vice-president, S. T. Gillispie; secretary-treasurer, A. B. Smith. This hospital has just closed its initial year of service to the public quite successfully, and promises to fill a much needed demand for a high class hospital to serve that section of the city.

The Children's Hospital, San Francisco, has decided to build within the year an additional wing costing some \$350,000, which will be devoted to maternity service and the development of a physiotherapy department as complete as is possible to plan.

The death of Dr. Virginia Milner, assistant resident at the hospital, occurred January 15, 1926. Doctor Milner sustained a slight superficial scratch on the back of the right hand a short time before the 29th of December, which was so trivial that she did not remember when or how it occurred. It apparently healed promptly, but was

further injured by scrubbing in the surgery on the 26th and on the 29th the tender spot was incised and treated surgically. There were soon all indications of a virulent infection which did not yield to treatment, and resulted in a virulent meningitis and a general septicæmia due to a hemolytic streptococcal infection from which she died seventeen days after the first recognition of the disease. Doctor Milner was a resident of Kentucky and a graduate of the Johns Hopkins University Medical School.

The monthly meeting of the Franklin Hospital Staff (as reported by George W. Becker, secretary) was held in the hospital on Monday, January 25, Irving S. Ingber presiding, after which the usual clinical meeting was held in the auditorium.

A large audience heard the papers, "Testicular Substance Implantations," by Leo L. Stanley, and a report of an "Interesting Case of Malaria," by J. Wilson Shields. Stanley gave a lengthy paper followed by lantern slides. His conclusions were the results of 1000 implantations of testicular substance, in 656 human subjects, including seven females. Striking improvements were noted in numerous cases of general asthenia, acne-vulgaris, and senility. Subjective or objective improvement was noted in rheumatism, neurasthenia, poor vision, and a few other diseases.

The operation is practically painless and harmless, and the technique as outlined by Stanley is very simple. He claims that the transplantation of the human testicular substance has a decided beneficial effect on the well-being of the patient. The implant does not live, but probably during the process of necrosis, certain substances are given off into the lymphatic, or blood stream, which stimulate the patient in some unknown way. The length of time which these beneficial effects last has not been definitely determined. It is possible that it lasts longer than a year. He does not claim that this procedure will increase longevity. This would be hard to establish, although he feels that anyone that enjoys good health and vigor and takes pleasure in living will outlive a patient with the opposite characteristics. As physical manifestations are a good indicator of one's state of health, he believes, judging from these as well as other indications, that beneficial effects may be produced by testicle transplantations. An interesting discussion followed, led by Hans Lissner and Victor G. Vecchi.

J. Wilson Shields reported a case of malaria which had baffled diagnosis for some time, until finally the crescents were found in the blood smear, illustrating how very necessary and helpful the laboratory is in clinical diagnosis of obscure conditions.

The San Francisco Polyclinic Staff held a meeting on November 24, 1925. T. Victor Hammond read a paper on "Myxedema" with presentation of case, making his diagnosis on the history, symptoms, physical examination and the effect of thyroid therapy, going into the details of the characteristic skeletal pathology, which consists of achondroplasia due to defective development and premature atrophy of the ossifying cartilages and to premature calcification of the bones at the base of the skull, while the dome is disproportionately large and thick. For the same reason the stature is dwarfed, while the shafts of the long bones are thick and massive. Numerous autopsies have revealed a total absence of the thyroid gland or a considerable diminution in its size, also degenerative changes in its parenchyma. There is a thickening of the subcutaneous tissue and often fatty deposits in certain locations. The hypophysis cerebri is defective in many cases.

Myxedema was differentiated from three other classes of patients: (1) those presenting skeletal similarities—rickets, syphilis, hydrocephalus and achondroplasia; (2) those presenting edematous similarities—nephritis, heart conditions and scleroderma; (3) mental—mongolian idiocy—infantilism. If thyroid gland therapy is not continued throughout the lifetime of the patient the symptoms recur. Henry Harris discussed the paper and especially the spontaneous myxedema of adults, saying that the disease is not such a rare condition as is generally thought to be. Ernest K. Stratton discussed the skin manifestations of this disease. Sanford Blum discussed myxedema in general and the patient presented as previously treated by him.

At the October meeting, Henry Harris presented (1) a patient with Hodgkins disease of five years' duration. This patient had been much relieved by x-ray applications.

(2) A clinical report was submitted of a syphilitic man, aged 45, who had been insufficiently treated. Four and one-half years ago he had fallen on his right elbow. Following this the right cubital gland became swollen and painful and was excised by S. Hyman. The laboratory report concurred in by two leading pathologists was lympho sarcoma. With mercurial injections and x-ray applications, the patient recovered entirely. This was interpreted as lymphadenitis simulating malignancy.

(3) A remarkable man, aged 56, was then demonstrated. He had been seen by numerous physicians in Europe and this country and had been the subject of several reports before English and German societies. In 1896 he had a chancre, with secondaries in 1897. In 1902, while still taking anti-syphilitic treatment, he developed nocturnal pain in the chest. The dyspnea, dysphagia and progressive weakness, together with the physical and radiologic signs, led Zumbush, of London, to diagnose mediastinal tumor in 1904. Later, a metastasis in the left neck was removed and diagnosed as alveolar sarcoma. He was sent to Vienna for x-ray treatment. Various physicians, including some of the most eminent, told him he was about to die. The result of his x-ray course was brilliant. He has been well now for over twenty years, competent and the executive head of a large metal company. This patient, his x-ray pictures taken during the past twenty years and his blood reports were shown. It was interpreted as a fortunate instance of lympho sarcoma, or possibly lympho granuloma in a syphilitic patient.

Comment was made on our inability to differentiate between the different lymphopoietic diseases, upon their resemblances to mild malignancy and their unfavorable prognosis.

Discussion was opened by H. C. Moffitt. One must not too hurriedly diagnose fatal mediastinal tumor. He, too, had seen at least one man with a favorable outcome, similar to the individual shown. Lympho sarcoma was amenable to x-ray influence. He showed an interesting series of mediastinal tumor x-ray pictures.

St. Francis Hospital, San Francisco, approved for residents. The Council on Medical Education and Hospitals of the American Medical Association has placed the St. Francis Hospital on the list approved for residencies, notifying the hospital in a letter to Dr. J. W. Ramsey, director, reading as follows:

"Very careful consideration has been given to the matter of the approval of St. Francis Hospital for general residencies for those who have already had a general internship, and it is a pleasure to inform you that the hospital is now so approved.

"Your position which enables you to obtain residents who have already had the advantage of a general training, and the opportunity which you have of still further advancing that skill and knowledge, are matters of sincere congratulation."

St. Joseph's Hospital Staff, San Francisco, met February 10, 1926. H. B. Carey opened the meeting with a case history of "Rupture of Liver During Pregnancy." The patient suddenly experienced a severe and continuous pain in the lower abdomen several weeks before term, but was up and about. Next day vomiting, restlessness, fast pulse, and shock appeared. Blood count showed 39,300 white cells, 94 per cent neutrophils, 3,488,000 red cells, and 54 per cent hb. Urine showed albumin but no casts. Temperature was 99.2, pulse 120 and respiration 22; blood pressure 130 systolic. Most of the tenderness was in the lower left quadrant. Cervix was dilated 4 cm. and head was high. After consultation with Mohn and C. E. Taylor the abdomen was opened and Cesarean section done. About a quart of blood, mostly coagulated and dark, was found. A laceration, about two inches long and vertical was noted in the posterior surface of the right lobe of the liver. The liver was large and friable. The laceration was cauterized with heat and gauze packed against the wound. After three or four days of stormy post-operative signs, the pulse varying from 140 to 150, and the temperature between 102 and 103, the mother and child went home and are doing nicely.

C. O. Southard spoke on "Atypical Mastoid Cases,"

and illustrated with four patients where the signs were not clear and the x-rays helped or mislead. One case had a protrusion of the right eye, irregular discharge from the left ear and perforation of the drum, but no pain. X-ray and operation showed extensive necrosis of the left mastoid, probably due to cavernous sinus thrombosis. Patient recovered and eye returned to normal. A second case was found to be necrotic and full of pus, although the x-ray showed no pathology. A third had signs of facial paralysis and positive x-ray signs of mastoiditis and was cured by operation. The last patient had deceitful x-ray signs but extensive operative findings.

Ernest Gehrels presented a case of "Anul Fistula Connecting with Urachus." This appeared as an anal fistula and had been operated upon twice for this condition, which he was suffering from for eleven years. The probe led from near the anus upwards for two inches outside of the rectum. The diagnosis was probably pelvic dermoid. The fistula led around the rectum on its posterior aspect and then turned anteriorly and upwards, so that loosening of the entire rectum on the left side was required for exposure. After having followed the fistula as far as it was possible, the probe was found bulging in the anterior abdominal wall, in the midline, at a point about two inches above the symphysis. It was decided to go in at this point two weeks later. In the meantime an x-ray picture was taken, filling the fistula with bismuth paste. A cystic sac was found filled behind the symphysis. Cystoscopy revealed no communication with the bladder and a diagnosis of cyst of the urachus was now made. The second operation was done extraperitoneally, loosening the bladder anteriorly and laterally. The cystic sac, the size of a dried fig, was removed and the fistula followed downward on the left side of the neck of the bladder. The patient made a good recovery. After three months the posterior fistula is closed. The microscopic examination of the sac and fistula showed only fibrous tissue, but no epithelium, which latter had probably been destroyed by the long suppuration.

W. A. Naylor demonstrated a patient with a "Long Standing Cellulitis of the Forearm," where early amputation of a finger had been refused and resulted in an extensive infection of the limb below the elbow and bone destruction, accompanied with general rigidity of all the joints in spite of many incisions to drain.

A. S. Musante and Marshall Ryer reviewed recent cases of pelvic peritonitis and gangrene of the colon, respectively.

The program of March 10 follows:

"Anatomy, Physiology and Surgical Importance of the Capillaries," by O. E. Eklund, M.D., and "Treatment of Infantile Paralysis," by Ethan Smith, M.D.

St. Luke's Hospital Clinical Club held a regular meeting at noon on Thursday, February 4, 1926. The subject of the day, "The Use of Heavy Metal Salts in the X-ray Diagnosis of Gall-bladder Disease," was presented by John M. Rehfish, who outlined a new method which, by the secretion of a heavy metal opaque salt into the gall-bladder, permits the accurate investigation of its morphology and function, probably the most important diagnostic contribution made to medicine by the x-ray since the day the first contrast meal was given. The sodium-tetraiodosulphophenolphthalein may be given intravenously or by mouth. We prefer the oral as the routine method—a smoothly contoured gall-baller shadow appearing twelve or fifteen hours after the ingestion of the drug and disappearing or growing considerably smaller an hour after a fat meal would seem to be thoroughly satisfactory evidence of an active and properly functioning gall-bladder. The non-appearance of the shadow, if checked once or twice, is probably almost certain evidence of a diseased organ or one in which the cystic duct is blocked by calculi. Our results in our small series have so far been uniformly satisfactory when checked at operation.

San Luis Obispo County Board of Supervisors have just advertised for bids for the erection of a new \$100,000 County Hospital, to be built at San Luis Obispo and known as the San Luis Obispo County General Hospital. This will fill a long-felt want in the county, and the erection has been advocated and urged by the San Luis



Obispo County Medical Society for some time. According to the plans, it will be a very modern and well equipped institution.

The Oaks Sanitarium, Los Gatos, will shortly build an attractive Nurses' Home.

Upon the return from Europe of Dr. William Voor-sanger, medical director, the sanitarium will erect a building to be used solely for the treatment of surgical tuberculosis.

St. Luke's Hospital, San Francisco. There is a medical news item of interest to all physicians in the monthly report of every hospital director to its board of governors. Of course, there are hospitals, or at least institutions that go by that name, who do not make any such reports, and news items about such would have very little or no value.

St. Luke's Hospital supplies the editor of CALIFORNIA AND WESTERN MEDICINE regularly with its monthly reports. They are well designed to give valuable information and are very much along the line that has the endorsement of medical organizations.

During the month of January, this hospital had 3977 patient days, or a total daily average of 128.2 patients. These were divided between those having absolutely free service; those paying part of the cost of their care to the hospital and those paying the regular fees for private patients.

The total earnings of the hospital for the month were \$31,440, and the expense \$33,192. It cost the hospital \$8.35 a day to render its service to the sick and the income from all sources was \$7.91 per day per patient. Some further idea of the magnitude of the hospital service is given from these figures:

Total meals served 38,733, at a cost of 20 cents a meal; 184,000 pieces of laundry were done at a cost of .004 cents a piece. There were 175 operations and no accidents or infections. The laboratory performed 2402 services and the radiological department nearly 700 services.

The director reports all records to be in splendid shape, all being indexed and filed and from 96 to 100 per cent of them complete in every detail. The resident staff of the hospital consists of one resident and six interns, and forty-three doctors of the visiting staff had patients in the institution during the past month.

A new central supply room has been introduced into the hospital, and the director reports that it is operating efficiently and with increased economy. Conditions governing the admission and care of free and part-pay patients, including those occupying endowed beds, is covered in a recent resolution of the board of directors of this hospital, reading as follows:

"(a) The patient is sent with the understanding that he will occupy a ward bed. If, in the judgment of the hospital, patient is suffering from a chronic condition and cannot be relieved by hospital treatment, such patient must be removed after reasonable time (presumably one month).

"(b) No free or part-pay patient may occupy a room or employ a private nurse without, first, consent of the medical director upon recommendation of the staff or social worker; second, with the understanding that room rates will be charged against the endowment and the patient, and that any excess over the income of fund must be met by the person placing the patient; third, that patients occupying rooms must arrange with the attending physician or surgeon for his services in case room treatment is not demanded by the character of the case or where ward treatment would suffice.

"(c) That the medical director notify the nominator or trustee when the income of the bed fund for which he is responsible has been expended in order that provision for subsequent payment may be made by such nominator or trustee."

William D. Haggard, president of the A. M. A., speaking on "teamwork for the health of the people," summed up:

"Neglect your business if you must; neglect your golf game if you can; your wife if you dare; but do not neglect your yearly health examination."

## California Medical Association

EDWARD N. EWER, M. D., Oakland.....President  
W. T. McARTHUR, M. D.....President-Elect  
EMMA W. POPE, M. D., San Francisco.....  
.....Secretary and Associate Editor for California

### PRINCIPLES OF MEDICAL ETHICS OF THE CALIFORNIA MEDICAL ASSOCIATION

The subjoined Principles of Ethics with relation to Industrial Medical Practice were recommended by the Committee on Industrial Practice and passed by the council of the California Medical Association at its meeting of January 30, 1926, in pursuance of the ruling of the House of Delegates at its 1925 session. The council ordered them to be printed in CALIFORNIA AND WESTERN MEDICINE and transmitted to each county society. They were adopted in response to a demand for a uniform set of rulings under which action for unethical conduct may be brought in the various county units in compliance with their several constitutions; and in order that these principles be operative, it will be necessary for each county unit to consult the provisions of its constitution as to whether or not a formal adoption is required.

In submitting the principles for publication in the journal, as instructed by the council, we feel that a word of explanation should go with them.

Various committees have been appointed and functioned since the question of compensation laws has faced the society and those of its members who are called upon to care for the injured workmen.

The principles in their present form are the result of much study and thought. I might say they are the results of the efforts of the several committees working for the past two or three years. With the help of Mr. Peart they have been codified and have received the endorsement of the council and their publication ordered. They are not perfect, nor do they cover all possible contingencies. However, we think they do cover the fundamental ethical principles for which they are intended.

We earnestly ask the profession, whether interested in industrial practice or not, to give them their attention and their support so that they will be properly and practically applied to questions arising in the county and section units.

PHILIP STEPHENS, M. D.

Chairman Committee on Industrial Medical Practice, California Medical Association.

Applicable to Industrial Medical Practice (professional services rendered under terms of the Workmen's Compensation, Insurance and Safety Act).

Adopted by the House of Delegates at Yosemite, May, 1925, codified by the council, January 30, 1926.

(Industrial Medical Practice as herein defined shall, by reason of similarity of conditions, include group practice covering non-industrial injuries and health of employees.)

Principles of Medical Ethics particularly applicable to Industrial Medical Practice:

#### I

WHEREAS, The principles of medical ethics of the American Medical Association expressly provide that it is un-

professional for a physician to dispose of his services under conditions which make it impossible to render adequate services to his patient or which interfere with reasonable competition among the physicians of a community, and that this is detrimental to the public and the members of the profession, and lowers the dignity of the profession; and

WHEREAS, The California Medical Association did, on the sixth day of December, 1919, adopt a fee schedule for the performance of such services, which schedule is the lowest consistent with proper care and service to and the welfare and safety of the injured workman;

WHEREFORE, It shall be unprofessional for any member to accept employment in any professional capacity directly, as consultant, or otherwise, on a fee basis or by salary, or otherwise, from any layman or firm or corporation owned or controlled by laymen and engaged for profit in furnishing professional medical and surgical services in Industrial Medical Practice;

PROVIDED, That this rule shall have no application to any licensed insurance company in rendering medical and surgical services to employees of its own assured, or to any association of employees who contribute in whole or in part to secure such services for their own benefit, or to any self-insuring employer furnishing such services to the employees of such employer; PROVIDED FURTHER, HOWEVER, That such insurance company or association, or employer shall not furnish such services through any intervening layman or lay organization.

## II

AND WHEREAS, Said American Medical Association has also announced as a fundamental principle that it is detrimental to the public good and degrading to the profession, and therefore unprofessional to give or receive a commission;

WHEREFORE, It shall be unprofessional for any member to dispose of his services in Industrial Medical Practice for any fee or compensation less than that prescribed by said fee schedule and such modifications thereof as shall from time to time be approved by this association;

PROVIDED, That if such employment is upon a salary basis, such salary taking all the conditions of employment into consideration, must be adequate, and the council of the member's county society shall be the final judge of the adequacy thereof;

AND WHEREFORE, For the same reasons it shall be unprofessional for any member of this association to share, divide, or pay over any portion of his compensation for such services directly or indirectly or in any manner to or with any person, firm, or corporation, or to rebate from fees received for his professional services at the rates prescribed by said schedule by money, services, or anything of value to any employee, employer, insurance carrier, broker, factor, or any person, firm, or corporation.

AND WHEREAS, The Principles of Medical Ethics of the American Medical Association provide that solicitation of patients by circulars or advertisements, or by personal communications or interviews, not warranted by personal relations is unprofessional; and that it is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other like self-laudations defy the traditions and the tone of any profession and so are intolerable. Said principles also provide, however, that the publication or circulation of ordinary simple business cards, being a matter of personal taste or local custom, and sometimes of convenience, is not per se improper. As implied, it is unprofessional to disregard local customs and offend recognized ideals in publishing or circulating such cards.

AND WHEREAS, Said Workman's Compensation Act and such group insurance practically deprives the individual patient of his free choice of physician unless at his own expense, and such medical and surgical service is arranged for in practice by insurance companies and employers by contract wholesale:

WHEREFORE, It shall be unprofessional for any member engaged in such practice to solicit employment by cir-

culars or advertisements, or personal communications, or interviews not warranted by personal relations or to procure patients by indirection through solicitors or agents of any kind;

PROVIDED, HOWEVER, That a member may in person, or by a Doctor of Medicine in his employ, or by letter, inform insurance companies, self-insuring employers and their representatives of his qualifications, experience, equipment, staff and offices qualifying him to handle such practice, such matter to be without self-laudation. The use of the member's name on automobiles or on service stations (except in reasonably sized letters for information) shall be unprofessional.

The use of first-aid notification cards shall be confined to insurance companies and employers. It shall be unprofessional for a member to permit his name to appear on any such card unless the card conforms to the following specifications:

All medical service cards shall be the property of the insurance carrier and/or the employer where displayed, and all expense of providing such medical service cards shall be borne by the insurance carrier and/or the employer; the name of the insurance carrier and/or employer shall appear in bold type at the top with no reading matter on the card with reference to the physician or surgeon, except his or her name, office location, hours, and telephone numbers; the card may contain necessary hospital and ambulance information; no member shall print, distribute, or use any card. All medical service order blanks shall have at the top of the card or order, "Medical Service Order of ———" (here inserting the name of the insurance carrier and/or employer). Order blanks shall always be printed so as to surely indicate that it is a medical service order from the insurance carrier and/or the employer and not the physician or surgeon himself.

## IV

Advertisements of hospitals owned or controlled in whole or in part by a member engaged in such practice, or in which the member is interested as a stockholder, director or otherwise, shall be governed by the Principles of Ethics of The American Medical Association relating to advertising by an individual; and all other relations of the member to and with industrial medical practice not herein specifically dealt with shall be governed by the Principles of Ethics of The American Medical Association.

## ANNUAL SESSION CALIFORNIA MEDICAL ASSOCIATION,

Oakland, April 26-May 1, 1926

The committee on arrangements are actively engaged in arranging for your entertainment at the annual meeting to be held in Oakland, April 26 to May 1, inclusive.

Special plans are also being made for the entertainment of the ladies. There will be luncheons, teas and cards at the various country clubs.

A detailed plan of the meeting will be printed in the next issue of the Journal.

Your attention is again called to the necessity for making your hotel reservations:

Rates of hotels in Oakland for the California State Medical Association, April 26 to May 1, 1926:

HOTEL—	SINGLE DOUBLE (With Bath)		SINGLE DOUBLE (Without Bath)	
	\$3.50 to \$7.00	\$5.00 to \$10.00	\$2.50	\$3.50 to \$4.50
Oakland ———	3.50	4.50		
Coit ———		5.00 (Twin)		
Harrison ———	3.00	4.00	2.00	3.50
		4.50 (Twin)		
Key Rt. Inn ———	2.50	3.50	1.50	2.50
Menlo ———	2.50	3.00	1.50	2.50
Royal ———	2.50	3.00	1.50	2.00
St. Mark ———	2.50	3.50	2.00	2.50
San Pablo ———	2.50	3.00	1.50	2.00
Sutter ———	2.00	3.00	1.50	2.50
Toutaine ———	2.50	3.00		
		4.00 (Twin)		

The Hotel Oakland has been selected as head-



quarters for the meeting. Please make your reservations with the Hotel Reservation Committee, care of Hotel Oakland.

Space for exhibits is available to advertisers in CALIFORNIA AND WESTERN MEDICINE, and information regarding floor plan and rates may be obtained from the Hotel Oakland.

CLARENCE A. DePUY, M. D.,  
Chairman of Arrangements Committee.

# ONE HUNDRED AND FIFTY-EIGHTH MEETING OF THE COUNCIL OF THE CALIFORNIA MEDICAL ASSOCIATION.

Held in the English Room of the Palace Hotel, San Francisco, California, Saturday, January 30, 1926, at 10:15 a. m.

**Present**—Doctors Parkinson, Ewer, McArthur, Catton, Kinney, Kiger, DeLappe, Beattie, Smith, Peers, Kress, Shoemaker, Gibbons, Pope, and General Counsel Peart.

**Absent**—Doctors Coffey, McLeod, Bine, and Curtiss.

**Invited**—Doctor Musgrave.

**Minutes of the Council**—On motion of McArthur, seconded by Gibbons, it was

**RESOLVED**, That the minutes of the one hundred and fifty-seventh meeting of the council, as mailed to each member thereof, be approved.

**Minutes of the Eighty-sixth Meeting of the Executive Committee**—The secretary read the minutes of the eighty-sixth meeting of the executive committee, which were approved as read.

**Minutes of the Eighty-seventh Meeting of the Executive Committee**—The secretary read the minutes of the eighty-seventh meeting of the executive committee, which were approved as read.

**Minutes of the Eighty-eighth Meeting of the Executive Committee**—The secretary read the minutes of the eighty-eighth meeting of the executive committee.

Doctor Kress stated that he was convinced that the ruling of the executive committee on the term "residence" did not have a sound foundation and the matter should be reconsidered. It was the sense of the council that the minutes of the eighty-eighth meeting should lay over until the afternoon session to permit of further consideration of the question of membership in adjoining county societies.

**Changes in Journal**—Doctor Musgrave presented facts regarding the publication of papers presented at the annual meeting. Letters of approval and condemnation of the policies of the journal were presented and the various steps in editing explained. Doctor Kress called attention to the tremendous amount of work involved in the editing of a first-class medical journal.

**Action by the council**: On motion of Kress, seconded by McArthur, it was

**RESOLVED**, That the report of the editor be referred to a special committee to examine the report submitted by the editor. Also that the report be printed in full by the editor for the convenience of members and the best interest of the journal. Furthermore, that a two-page digest be made for the annual state directory (same to be printed on two opposite pages).

On motion of Catton, seconded by Smith, it was

**RESOLVED**, That the council give a vote of appreciation and confidence to the editor and in addition vote him assurance that we are at all times only attempting to promote what is a representative journal.

The chair appointed Doctors Kress, McArthur, and Peers, a special committee of three and suggested that Doctor Catton, member of the program committee, be also requested to attend the session of the committee.

The editor explained the desirability of having the journal stitched instead of stapled and suggested that the number containing the annual program should be stitched. This matter was referred to the executive committee for consideration.

**Industrial Medical Practice**—The report of Philip Stephens, general chairman of the Industrial Medical

Practice committee, was read by the secretary. It was the sense of the council that the report be received and placed on file and that it be read at the open meeting of the council at 8 p. m.

**Clinical Prize Committee**—The chairman reported on the present status of the committee. Upon the resignation of Doctor Walter C. Alvarez, chairman of the committee, Dudley Fulton was offered the chairmanship and George Dock, of Pasadena, offered a position on the committee. Dudley Fulton suggested that George Dock be made chairman. No reply has been received from Doctor Dock. The name of James F. Percy, of Los Angeles, was suggested as a committeeman.

**History of the California Medical Association**—The report of Emmet Rixford, chairman of the committee on the history of the California Medical Association, was read by the secretary. It was the sense of the council that the report should be received and placed on file.

**Medical Officers' Reserve Corps**—The report of J. Wilson Shiels, chairman of the Medical Officers' Reserve Corps committee, was read by the secretary. The editor pointed out the fact that California Medical Officers' Reserve Corps was receiving more publicity than any other reserve corps in the United States, but was still the lagging state.

**Physicians Income Tax Reduction**—No action taken.

**Delegates to the A. M. A.**—The secretary read excerpts from letter of Olin West, secretary of the American Medical Association, to Victor C. Vecki, regarding delegates to the A. M. A. at Dallas, and stated that two new members should be elected for 1927 at the house of delegates meeting.

**Adjournment**—The council adjourned to meet in the same room at 2 p. m.

Held in the English Room of the Palace Hotel, San Francisco, California, Saturday, January 30, 1926, at 2 p. m.

**Present**—Doctors Parkinson, Ewer, McArthur, Catton, Kinney, Kiger, DeLappe, Smith, Coffey, Peers, Kress, Shoemaker, Gibbons, Pope, and General Counsel Peart.

**Absent**—Curtiss, Bine, McLeod, and Beattie.

**Communication from John L. Beard**—Letter from Doctor John L. Beard, of Martinez, disapproving the amount of dues and the activities of the association and reply to Doctor Beard were read by the secretary. No action taken.

**Affiliate Members**—The approval of the council was asked of affiliate members presented through the San Diego County Medical Society.

**Action by the council**: On motion of Kinney, seconded by Smith, it was

**RESOLVED**, That the affiliate membership of Robert F. Rooney, Auburn; P. C. Remondino, San Diego; P. James Parker, Elsinore; Fred Baker, Point Loma; Charlotte LeB. Johnson, Point Loma, and Thomas Magee, San Diego, be authorized.

**Permanent Convention Headquarters**—Harlan Shoemaker, chairman of the committee on permanent convention headquarters, stated that he had no report to submit at this time, but requested that the committee be continued.

**Laymen as Directors of Public Health Departments**—The secretary read a letter from the Chicago Medical Society asking for action on the following resolution:

WHEREAS, The American Public Health Association, at its annual meeting in St. Louis, in October, 1925, listened to an address by one of its members, favoring a new doctor in each community where a health officer is needed, to be known as a Doctor of Public Health, and

WHEREAS, Several institutions of learning have introduced courses in public health whereby a layman, as well as a physician, may be instructed and in a comparatively short time qualify as a Doctor of Public Health (D.P.H.), and be allowed to advise, qualify and practice preventive medicine, and

WHEREAS, In all probability a bill to license a so-called D. P. H. will be introduced into the next session of the state legislature of Illinois, and

WHEREAS, The Chicago Medical Society believes that all health officials should be first physicians (M.D.), who have the proper knowledge of the sciences concerned in

public health, and that such knowledge cannot be gained by any layman in two or three years, and

WHEREAS, Such an arrangement of a layman being a health official, places a double expense on the community, since it is necessary for the community to then procure the service of an M. D., in addition to a layman, and

WHEREAS, The state confers on an M. D. the right to practice medicine and surgery in all its branches, while the special licensing of a D. P. H. would be special legislation tending to take from an M. D. that right; therefore be it

RESOLVED, That the Chicago Medical Society believes all positions of trust pertaining to public health in any community should be held by physicians (M. D.), and not by laymen holding D. P. H. licenses, and be it further

RESOLVED, That the Chicago Medical Society views with displeasure any move on the part of the American Public Health Association, which may express a desire to replace physicians as health officials by laymen with D. P. H. licenses, and be it further

RESOLVED, That a copy of this resolution be sent to the American Public Health Association; to all those institutions of learning where courses in public health are given with a view of conferring a D. P. H. degree; and to every state medical society with a request that their component county societies be made acquainted with the proposed activities of a public health association, whose president is a layman.

Action by the council: On motion of Shoemaker, seconded by Gibbons, it was

RESOLVED, That the council of the California Medical Association heartily endorse the action of the Chicago Medical Society, and be it further

RESOLVED, That copy of the resolution of the Chicago Medical Society, together with copy of the endorsement of this council be forwarded to all county units.

**Amendments to Constitution of California Medical Social Workers**—Mr. Celestine J. Sullivan reported that there had been no new developments in the activities of the Medical Social Workers, and pointed out the broad field that was covered by this term. The secretary read the proposed amendment to the constitution of California Medical Social Workers which provided for a raise in standard by calling for two years actual social work.

Action by the council: On motion of Kress, seconded by Catton, it was

RESOLVED, That the matter be referred to the executive committee with the recommendation that as the proposed amendment appears to raise the standards of social workers, it should be endorsed. Further, that the whole matter of Medical Social Workers be referred to the house of delegates. Also that the chairman prepare memorandum to be sent out prior to the council meeting in Oakland, on the subject to familiarize the council members with existing conditions.

**Gift of Doctor Musgrave**—The gift of Doctor Musgrave of 200 shares, fully paid up, of Better Health stock, to the California Medical Association was presented. The question of the responsibility of the association in accepting the gift, both financially and from the standpoint of policy, was discussed. General Counsel Peart explained the liabilities of the association briefly from the legal standpoint. A general discussion was had.

Action by the council: On motion of Kress, seconded by Ewer, it was

RESOLVED, That the gift of Doctor Musgrave be accepted.

The chairman ordered a rollcall. Doctors Ewer, McArthur, Catton, Kinney, DeLappe, Smith, Coffey, Peers, Kress, and Gibbons voted in favor of acceptance; and Harlan Shoemaker voted not to accept, stating that while he thoroughly endorsed the great work already accomplished and now being performed by the publication, that he believed that the organization should be kept separate.

On motion of Smith, seconded by McArthur, it was

RESOLVED, That this council express to Doctor Musgrave its deep appreciation of this very generous gift to the California Medical Association, a gift which exceeds in cash value anything that has heretofore ever been given to the California Medical Association and for which Doctor Musgrave paid \$20,000 in cash.

**Amendment to By-Laws**—Doctor Kress of the special committee appointed by the chair to investigate the

ruling of the executive committee on residence in adjoining county societies presented a proposed amendment to chapter 7, section 8, of the by-laws, to read as follows, and to be substituted for the present section thereon:

#### CHAPTER 7, SECTION 8

"A physician who states he has his major office for professional practice in one county, even though his legal home or residence may be in some other county, may have the option of joining or maintaining his membership in the county medical society of the county in which he has his major office for professional work, or in the county medical society in which county he has his legal home or residence."

It was the sense of the council that the proposed amendment to chapter 7, section 8, be included in the report of the council and go before the house of delegates.

**Minutes of the Eighty-eighth Meeting of the Executive Committee**—Minutes of the eighty-eighth meeting of the executive committee were approved as amended.

**Model Constitution and By-Laws for State Societies**—The question of model constitutions and by-laws for state societies was passed without action.

**Amendments to By-Laws**—Doctor Kress called attention to the fact that when the executive committee of the society was first formed, the attorney of the society, against his wishes, was placed thereon. Inasmuch as the presence of a non-member had given rise to criticism, Doctor Kress proposed an amendment to eliminate the general counsel as an active member of the committee. The general counsel, Mr. Peart, was most happy to have this done.

Doctor Kress' proposed amendment provided that chapter 5, section 15, be amended so that the general counsel would not be a member of the executive committee, by the elimination of the words "general attorney" and the addition of the words "the executive committee" in chapter 5, section 13, after the word "council" in line seven of said section. It was decided that the amendment should be submitted to the house of delegates.

**Changes in Journal**—Doctor George H. Kress, chairman of the special committee appointed by the chair to examine the data furnished by the editor, advised that the committee was in accord with the spirit and language of the report and would suggest only some minor changes in words and phrases in the body of the report. The committee recommended also that there be attached to Editor Musgrave's report the action of the council taken at the one hundred and fifty-seventh meeting on papers read at an annual meeting. To relieve the editor of some of the preliminary reading of all papers, an additional paragraph was suggested by the committee. The whole would then read as follows:

#### GENERAL INFORMATION

CALIFORNIA AND WESTERN MEDICINE is owned by the California Medical Association, and every member has an equal interest in that ownership. Therefore, each member has equal responsibility in its welfare and equal call upon its space and service.

The magazine aims to be, as far as it is humanly possible to make it so, the official voice of a great medical organization; the representative spokesman of other medical and health organizations with which it has agreements and the proponents of medical and health progress everywhere.

CALIFORNIA AND WESTERN MEDICINE is managed and conducted by elected and appointed representatives of the owners. It is published under an approved policy of sustained efforts at progress and healthy growth. From a financial point of view it is a very valuable property and it is becoming increasingly so constantly.

CALIFORNIA AND WESTERN MEDICINE is an independent exponent of medical and health progress. It makes no entangling alliances. It promotes the interests of worthwhile agencies of health progress; ignores, criticizes, or condemns, the useless, spurious, badly managed and unwholesome without fear or favor.

#### INFORMATION FOR CONTRIBUTORS

The contributors' columns of CALIFORNIA AND WESTERN MEDICINE, whether for essay, correspondence or what-not, are open upon precisely equal terms to all members of the California Medical Association and of the other



medical and health organizations with which it is affiliated, and to others under conditions agreed to by the editor and approved by the advisory publication committee of the California Medical Association.

**Note**—With the approval of the council the editor consults with and refers manuscripts to various members of the association for their advice, suggestion and opinion before accepting same for publication. This group is referred to herein as the advisory publication committee and its members as editorial advisors and the personnel is not fixed but includes different men from time to time, whose services are requested in this connection by the editor. The identity of these men is kept strictly confidential by the editor.

In accepting or declining contributions, the editor and editorial counselors are influenced by a variety of considerations, the most important of which are:

**The Eligibility of the Author**—Eligibles are members of the California Medical Association; members of other affiliated or accredited medical or health organizations, or invited contributors.

**Subject Matter**—Any is acceptable upon any phase of the broad subject of health betterment which, by reasonable interpretation, is adjudged useful to all personal health physicians. Thus, contributions upon specialties that contain matter of value to all physicians regardless of limitations in practice are acceptable, but those by specialists for specialists should be offered to appropriate special magazines.

**Scientific Merit**—Contributors must contribute information of value to medicine. This may be new knowledge; a worthy and timely restatement of existing knowledge; a recitation of personal experiences; helpful criticism; exposition of theories as such, or any other form of message useful to the educated physician.

**Literary Merit**—To be acceptable, contributions must conform to reasonable literary decencies. The subject must be adhered to and its message clearly, connectedly and succinctly expressed in acceptable English. Every sentence must be at least a complete one. Essential alterations, corrections, abridgings and modifications are the recognized inherent and unavoidable duty and responsibility of the editor.

**Public Policy**—CALIFORNIA AND WESTERN MEDICINE aims to promote the cause of medicine and health, the interests of contributors and readers and to sustain its own prestige as a progressive magazine. All of these interests are served by contributions that promote any one of them. *Thus the interests of author and editor are identical.* The occasional author who resents having his contribution edited or declined should appreciate this fact and also that medical writing is as much a specialty as medical action. The only *permanent* record of value that a physician may leave to posterity is his published contributions. Surely these should be of his best. Even during his active life it is only by his published contributions that he may extend his influence beyond a few personal acquaintances, students and patients. That influence deserves to be safeguarded by making every published sentence as good as the author can make it. To do this, again makes the interests of editor and author one and inseparable.

**Brief Contributions** are easier fit into the "mechanics" of a magazine and, therefore, other conditions being equal, have a better chance of early publication. CALIFORNIA AND WESTERN MEDICINE prefers copy of from 1000 to 3000 words, and cannot use, except for extraordinary reasons, contributions of more than 4000 words.

**Responsibility** for accepting or declining contributions is an unavoidable duty of the editor. Evaluation of contributions, for purposes of publication, as in the case with all good magazines, is made by editorial advisors, but the editor publicly assumes responsibility for their finding. Thus the proverbial editor.

**The Date of Publication** of accepted material is perforce governed by many factors, a few of which are: The date of acceptance, the length of the paper, the amount of editorial work required, the subject matter, available space, condition and amount of the total reserve accepted copy on hand, as well as the balance as between subjects in the reserve. Every issue must contain a varied intellectual diet, and this cannot be left to accident

in the constant in-pouring of copy. Certain official matters about medical organizations, addresses by officers, invited guests, chairmen of sections, offerings of new discoveries, discourses on subjects of "seasonal" value, and similar matter may receive "advanced" publication.

Every worth-while magazine must have on hand at least six months' reserve of accepted copy. This amount should not be materially exceeded, except, perhaps, for a few months after a large medical meeting, when this reserve obviously will be much larger.

**Reading Audience**—It is well for authors to bear in mind, as the editor is required to do, that CALIFORNIA AND WESTERN MEDICINE is a general medical magazine. Probably more than 75 per cent of its physician readers are in general practice, and the other 25 per cent are divided between more than twenty specialties. Specialists, in preparing their articles for publication, should bear this fact in mind, and submit to CALIFORNIA AND WESTERN MEDICINE copy dealing with those phases of their specialty that ought to be interesting to the majority of physicians. The more limited and more highly technical articles, written primarily for an audience made up of specialists, should be submitted to special journals and not to CALIFORNIA AND WESTERN MEDICINE. It is extremely important for all authors to remember that our magazine is extensively read by technicians and workers in various fields of health and by some thousands of non-medical readers, including some who are constantly looking for something that may be quoted in anti-scientific propaganda.

**Delayed Publication**—Trouble, expense, correspondence and delay in publication can be limited by submitting *one original, clean, double-spaced typewritten copy on standard letter size paper, and one carbon.* At the same time, authors will facilitate the handling of their copy if they will submit the names and addresses of physicians whom they desire to have discuss their papers. If no discussion is desired, a note to that effect should be made.

No more certain cause of delay in publication can be invented than for an author to criticize his colleagues in his scientific discussion. This also may be the determining point in declining a contribution. Those who wish to offer criticism of the profession as a whole, or any section of it, should make it in letters to the editor.

**Exclusive Publication**—CALIFORNIA AND WESTERN MEDICINE will not publish knowingly a paper that has been accepted for publication elsewhere. We do occasionally publish papers declined by other publications, provided that, in the opinion of the editorial advisors, they are suitable for our magazine.

The paper that secured the widest and most favorable comment of our last year's issues was revised twice by the editors and three times by the author, and in these processes was reduced from some 8000 words to about 3000. Incidentally, the author severely criticized the editor twice during the months of the refining process, but he wrote a compensating letter of apology after reading the fine reviews in both the medical and public press that his article secured. The moral is, that an author should no more risk his scientific and cultural standing by offering sloppy, unedited copy for publication that he would risk his social standing by attending a formal party dressed in overalls. Members of the editor's advisory committee like to examine clean, double-spaced, original typewritten copy. One of them has said he believed a medical essayist who would send in a smeary, much-interlined carbon copy of his article would operate with dirty fingernails. Perhaps he was joking, but it is well for would-be authors to remember that the only *permanent* background a doctor can create is through his written and published word. This should represent the best that is in him.

**From Author to Printer**—The steps through which copy submitted to CALIFORNIA AND WESTERN MEDICINE go, are:

- (a) A prompt acknowledgment of communication.
- (b) A cursory examination of the paper by the editor with a view to determining the eligibility of the author and the general trend of his discourse.
- (c) Reference to an editorial advisor for an opinion.
- (d) If the advisor recommends publication, the paper is carefully examined by the editor and if his opinion

agrees with that of the advisor, an offer of acceptance, under stipulated conditions governed by the state of reserve supply of accepted copy, is made.

(e) If the editorial advisor reports unfavorably on the contribution, it is then sent to another advisor. If his opinion agrees with the first one, the article is declined. If they disagree, as sometimes happens, the paper is then referred to a third advisor, and the majority opinion forms the basis of the editor's study and action.

(f) Articles that deal intemperately with questions of medical organizational policy may be referred to the executive committee, and the action of that committee is final.

(g) All correspondence between the editor and the editorial advisors is protected by editorial ethics governing confidences which are regarded as inviolable as are the confidences between doctor and patient.

(h) Once a paper is accepted, the real work of the editor begins.

Practically all additional information about the preparation, acceptance and publication of scientific articles is so successfully provided in "The Art and Practice of Medical Writing," by George Simmons and Morris Fishbein, that this little book (published by the American Medical Association) is adopted as its *vade mecum* by CALIFORNIA AND WESTERN MEDICINE. Its precepts will be followed except in points modified by action of the California Medical Association to meet our requirements.

Authors who study and apply the principles put forth in this little book will rarely have their contributions declined by any medical editor except for lack of space.

As to papers read before an annual meeting, the foregoing is subject to the following special provisions:

RESOLVED, That no paper shall be read by any member of the association at any annual meeting until same has been submitted and approved by the program committee, and the program committee is authorized, if it so desires, in determining whether any paper shall be worthy of presentation, to secure the opinion of any member or members of the association; and be it further

RESOLVED, That all papers read at the annual meeting be published in full in CALIFORNIA AND WESTERN MEDICINE as soon after the meeting as space will permit; or at the option of the author, an abstract of the paper of about one column in length shall be published as soon as possible after the meeting with reprints in full of the entire paper, captioned: "Read before \_\_\_\_\_ annual meeting of the California Medical Association, (date)" (the cost of setting up type for the reprints to be borne by the association, and all other costs to be borne by the author). All such papers shall always be subject to editorial revision in the usual manner; and be it further

RESOLVED, That all papers so read at an annual meeting in any section must receive the recommendation of the section chairman and section secretary for publication; and the papers so recommended shall then be sent to the general program committee for its sanction or non-sanction of publication.

The committee further recommended that chapter 6 of the by-laws be amended as follows: Add to chapter 6 of the by-laws, after the words "four years" the following proposed amendment:

"The editor of the state journal shall be ex-officio a member of the general program committee."

Action by the council: On motion of DeLappe, seconded by Kiger, it was

RESOLVED, That the report of the special committee be adopted.

The question of to what extent the editor shall submit editorial matter to the executive committee or the general counsel of the association was discussed.

**California State Dietetic Association**—President Ewer advised that the California Dietetic Association was desirous of attending a session of the California Medical Association convention.

It was the sense of the council that an invitation be extended the association by the secretary through Helen B. Anderson, president of the association.

**Effect of Excessive Fees Upon the Lay Public**—The case of excessive fees charged by physicians was brought to the attention of the council and it was decided that the profession should know that such procedure was against the policy of the association and that the matter be submitted before the house of delegates.

**Resignation of Rene Bine**—Letter from Doctor Rene Bine submitting his resignation as councilor-at-large was read. The fact that Doctor Bine had been co-operating with the secretary's office and assuming various duties as councilor was brought out.

Action by the council: On motion of Ewer, seconded by Gibbons, it was

RESOLVED, That the council having heard the communication of Doctor Bine, councilor-at-large, hereby request him to withdraw his resignation.

**Councilor for Third District**—The secretary read a communication from Doctor Garth Parker expressing regret of his inability to accept the position as councilor of the third district.

The council appointed Doctor W. H. Bingaman, Salinas, to fill the unexpired term of Doctor Edwards.

**State Automobile Circular**—The question of enclosing circulars of the State Automobile Association with letter sent to members of the medical society was discussed. It was pointed out that the action might be construed as soliciting insurance for a particular company and would probably result in criticism. Matter dropped.

**Credentials Committee**—Doctor Kress suggested that a new section be added to chapter 3, providing for the appointment of a credentials committee.

### CHAPTER 3, SECTION 9

"The chairman of the council, or the speaker of the house prior to each annual session, shall appoint a credentials committee consisting of two members of the house of delegates and the society secretary ex-officio. The function of this committee shall be to register and to pass on the credentials of all members of the house of delegates, and submit to the house of delegates a written report or reports giving the names of all members eligible thereto. Provided, however, that the members seated by the committee, shall have the right through a two-thirds vote, to amend the report or reports of the credentials committee."

**Amendment to Constitution and By-Laws**—The advisability of having the same procedure as the A. M. A. has for chairman of the house of delegates known as the speaker was discussed. The proposed amendment in regard to a speaker and vice-speaker of the house, would read as follows:

Amend constitution, article 6, section 1, by inserting after the word "vice-president," the following: "a speaker and a vice-speaker of the house of delegates."

Amend article 6, section 3, by adding thereto the following: "The speaker and the vice-speaker who may or may not be members of the house of delegates shall be elected for the term of one year commencing on the adjournment of the annual meeting at which elected."

Amend article 7, to make the first sentence thereof read as follows: "The council shall consist of the elected councilors and ex-officio the president, the president-elect, the vice-president, the speaker, and the vice-speaker of the house of delegates."

Amend the by-laws as follows: Re-number sections 3 and 4 as sections 4 and 5, adding a new section after section 2 to be numbered section 3, reading as follows: "The speaker shall preside at the meetings of the house of delegates and shall perform such duties as custom and parliamentary usage require. He shall have the right to vote only when his vote shall be the deciding vote. The vice-speaker shall officiate for the speaker in the latter's absence or at his request. In case of the death, resignation, or removal of the speaker, the vice-speaker shall officiate during the unexpired term."

It was the sense of the council that the matter be presented at the house of delegates as part of the report of the council.

**Invited Guests to C. M. A.**—The secretary reported on the guests invited to hold clinics at the annual meeting.

**Medical Society of the State of California**—On motion of Smith, seconded by DeLappe, it was

RESOLVED, That secretaries of county societies be requested whenever possible to point out to members the heavy expense sometimes entailed upon them by failure to carry optional defense.

**Adjournment**—There being no further business the council adjourned to meet in the same place at 8 p. m.



### Open Meeting of the Council of the California Medical Association

Held in the English Room of the Palace Hotel, San Francisco, California, Saturday, January 30, 1926, at 8 p. m.

**Present**—Doctors Parkinson, McArthur, Catton, Kinney, Kiger, DeLappe, Smith, Shoemaker, Gibbons, Pope, and General Counsel Peart.

**Absent**—Doctors Ewer, Beattie, Coffey, McLeod, Peers, Bine, Kress, Curtiss.

**Invited**—Doctors Stephens, Winterberg, Van Geldern, Cleary, Adams, Kimberlin, Rixford, and Taylor of the Industrial Medical Practice committee; and Doctors Mahoney and Righetti.

**Industrial Medical Practice**—The secretary read the report of Philip Stephens, chairman of the Industrial Medical Practice committee. Doctor Righetti discussed the present status of industrial medicine. General Counsel Peart suggested that the Principles of Medical Ethics, rule 1, should be amended so that the last phrase reads: "or employer shall not furnish such service through any intervening layman or lay organization," and the second paragraph of rule 3 should include the words: "unless at his own expense" after the word "physician." The question of adoption of the rules with amendments as submitted was presented.

Action by the council: On motion of DeLappe, seconded by Gibbons, it was

**RESOLVED**, That the rules on the Principles of Medical Ethics, as amended, be adopted.

The question of distribution was brought up and discussed.

Action by the council: On motion of DeLappe, seconded by McArthur, it was

**RESOLVED**, That the secretary be instructed to have these rules published in the journal of the association; the type held and reprints made from same in such quantity as seems sufficient. Reprints to be distributed to all component county units.

**Death of Doctor Edwards**—The chair appointed Doctors Ewer, Beattie, and McArthur a committee of three to draft resolutions on the death of Doctor Thomas Clay Edwards.

**Adjournment**—There being no further business, the meeting adjourned.

### ALAMEDA COUNTY

**Alameda County Medical Association** (reported by Pauline S. Nusbaumer, secretary)—The regular monthly meeting of the Alameda County Medical Association was called to order by the president, J. K. Hamilton, in the Ethel Moore Memorial Building, January 18, 1926, at 8:15 p. m. The meeting was devoted to military and medico-legal subjects with the following program: "Medical Officers Reserve Corps," by Edward L. Munson, Colonel, Medical Corps, U. S. Army (by invitation); "Origin of Medical Defense," by E. N. Ewer; "Malpractice Suits from a Legal Man's Standpoint," by Hartley F. Peart, Counsel (by invitation); "Malpractice Suits from a Medical Man's Standpoint," by S. H. Buteau. Discussion opened by O. D. Hamlin, H. G. Thomas and E. A. Majors.

At the conclusion of the program the usual business was transacted and the meeting adjourned, after which light refreshments were served.

### CONTRA COSTA COUNTY

**Contra Costa County Medical Society** (reported by S. N. Weil, secretary)—The first meeting of the Contra Costa County Medical Society of this year was held January 30 in the office of Dr. U. S. Abbott in Richmond.

Charles Dukes of Oakland entertained the Society by relating his travels in Europe, illustrating by miniature moving pictures. He spoke of his visit with Dr. Gye of London, who is doing great work in the research of cancer. He was enthusiastically received and his splendid presentation was appreciated by all.

J. W. Bumgarner of Richmond was admitted to the society.

J. M. McCullough, president of the society, was chosen delegate for the State Convention of 1926.

M. Denniger-Keser was chosen as alternate delegate.

Those present were: U. S. Abbott, G. W. Bumgarner,

J. Beard, H. L. Carpenter, D. Keser, L. H. Frazer, E. R. Guinan, C. Cross, L. St. Hely, F. L. Horne, J. M. McCullough, R. Powell, W. A. Rowell, H. Vestal, S. N. Weil; Miss A. Driscoll, R. N.; Mrs. Moore, R. N.; Mrs. Rejman, R. N.

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### HUMBOLDT COUNTY

**Humboldt County Medical Society** (reported by Lawrence A. Wing, secretary)—The Humboldt County Medical Society met at the Eureka Inn, January 28, for dinner and the annual election of officers. *There were twenty-one members out of a possible twenty-six present*, the largest attendance of any previous meeting of the society.

The newly elected officers are as follows: President, Charles Caskey; vice-president, Harry Jenkins; treasurer, Mabel A. Geddes; secretary, L. A. Wing; delegate, W. J. Quinn; alternate, J. N. Chain.

The following were elected as new members: Harry Jenkins, Eureka; O. B. Barron, Ferndale; Allan Watson, Eureka; G. F. Norman, Eureka, and H. W. Comfort, Rio Del.

The paper of the evening on Obstetrics was presented by W. J. Quinn and was discussed by C. O. Falk, J. N. Chain, J. F. Walsh—in fact nearly every member present took part in the discussion. At our next meeting, February 23, J. F. Walsh will present a paper on some phase of surgery.

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### SACRAMENTO COUNTY

**Sacramento County Society for Medical Improvement** (reported by Bert L. Thomas, secretary)—Despite the added attraction of a one-night stand of Sousa's Band and the height of an influenzal epidemic, our January meeting, held in the Gold Room of the Sacramento Hotel on the evening of the tenth, was attended by forty-seven members and one guest. C. E. Schoff, our new president, was presented with a beautiful bouquet of pink carnations by Fred Graser.

**Case Reports**—Brendel presented a patient who, sixteen months ago, suffered a complete paralysis due to pressure on the cord. The pressure was relieved at operation, and a spinal graft was done. The patient returned to his ordinary work after nine months. Tonight he was shown to demonstrate the return of practically complete mobility.

Gundrum reported a case of a woman of 35 who had had five previous normal, uneventful pregnancies. During this, her sixth pregnancy, headache, edema and nausea all presented just at the start of labor. Six hours post-partum, a comparatively typical eclamptic convulsion occurred with, however, a temperature of 103. An immediate laboratory investigation demonstrated short-chain streptococci in the urine, as well as identical ones from a tonsil culture. Further investigation revealed that three weeks before, three of her children had had severe sore throats. The case was reported to stress the importance of eliminating any additional toxic factor during a pregnancy.

Drysdale reported a fulminating influenzal infection which, in addition to painting the usual influenzal picture, in rapid succession gave a pyelitis, an osteomyelitis and a terminal pericarditis.

Harris reported a case of Köhlers disease. This is an os navicular pedis retardatum occurring in boys between the ages of 5 and 8. It starts with soreness about the ankle and tenderness found over the tarsal scaphoid. By x-ray the scaphoid is shown disc-like and dense, and is narrowed in its lateral diameter. Radiograms of the condition were presented. With no known etiology, the disease has to be differentiated from tuberculosis, syphilis and osteomyelitis. The treatment is absolute rest in a cast, which gives an uninterrupted and uneventful recovery.

**Paper of the Evening**—"The Treatment of Syphilis," by C. E. Schoff. After a general survey of the disease, the question was raised as to why so many cases of syphilis go on to no cure. The reason for this must be either insufficient or inefficient treatment. Too much confidence is placed in the blood Wassermann reaction. This extends to those being treated, so much so that the patient becomes "intelligently ignorant." A definite case entity was presented to demonstrate this common mistake. A patient was seen with a positive dark field and a negative Wassermann.

Eight neo-salvarsans were administered, followed by intra-muscular mercury. Two weeks later the Wassermann was still negative. After three months' rest from all treatment, the patient returned, his Wassermann was found negative and the doctor assured him that he was cured. Four years later this man returned with a typical tabes. This doctor, a good man, fell into the fairly common error of depending on the blood Wassermann—he banked all on unreliable information. In connection with this sort of thing, Fordyce suggests that the error is always likely to be on the negative side rather than on the positive side. He goes further and says that the word "cure" should be entirely eliminated when speaking of this disease.

Schoff, throughout his paper, stresses the importance of intensive treatment, i. e., the use of available drugs up to the patient's capacity to accept them. We must not only get a negative blood Wassermann and a negative spinal test, but negative general physical findings over periods of years.

As to a choice of drugs, we have many to choose from. Of the arsenicals, the relative merits of arsphenamine, uro-arsphenamine, sulph-arsphenamine, silvo-salvarsan and neo-salvarsan were discussed. An excellent summarization of the value of sulph-arsphenamine (which has in its favor the highest percentage of arsenical penetration of any drug now at our command), was presented by reviewing its use at the Sacramento Municipal Clinic. In addition to its general therapeutic value, it is interesting to note that, in over 3000 injections, there were no skin reactions recorded. Schoff also reviewed the work of Stokes in regard to the intra-muscular use of sulph-arsphenamine.

Trypsarsamid has no place in primary and early secondary lues. Its chief value is due to its penetration of nerve tissues, therefore its use should be confined to late lues.

Schoff ranks arsenic first, bismuth second and mercury third, as to their spirochaetocidal action. The use of bismuth is not new, as it had been used locally since the seventeenth century. Its cicatrizing effect is rapid. Since 1920 a great deal of work has been done by the French in the use of bismuth. Some go as far as to state that the early use of their preparations in sufficient quantities will effect a cure. Further, at any stage, all lesions are rapidly affected; as well as the blood Wassermann reaction. Its use in those cases resisting arsenic and mercury is particularly gratifying. Series of cases, Wassermann fast to previous drugs, were shown in round numbers, a 33 per cent complete reduction, and 25 per cent partial reduction after the intensive use of various bismuth preparations. The more soluble forms are readily absorbed, therefore a close watch must be kept on the kidneys, mouth and bowels. At present, its intravenous use is taboo. Of course, there is some question as to the permanency of its effect, as its use is comparatively new. A brief discussion of non-specific therapy was introduced. During the course of his paper, Schoff presented a series of slides, showing the relative absorbability of bismuth products.

The paper was briefly discussed by Reardan.

Applications for Membership—The applications of Frank P. Topping and James A. Warburton were read. After the second routine readings of Frank Warne Lee and Clarendon A. Foster, a vote was taken. Lee was unanimously elected to membership.

Report of the Board of Directors included the announcement that C. E. Schoff had been elected president and Nathan G. Hale had been elected vice-president for 1926. The Program Committee is to consist of Hale, chairman; Dunlap, and Drysdale. The Banquet Committee is as follows: Drysdale, chairman; G. J. Hall, W. W. Cress, E. W. Beach and E. S. Babcock. The Committee on Revision of By-Laws, consisting of Parkinson and Hall, is to stand for the ensuing year. In keeping with Rixford's letter relative to the appointment of a local medical historian, the board appointed Parkinson.

Communications were read from the Commissioner of Corporations of the unreliability of the Guanajuato Mother Lode Silver Gold Corporation; from the Committee of Whiskerino's and Whiskerette's announcing a festival on January 27, the proceeds of which are to be used for the Boys' Dormitory of the Sacramento Orphanage; from Emmett Rixford, outlining the work to

be done by the Committee on the History of Medicine of the California Medical Association; from the Metropolitan Life Insurance Company, offering instructive graphic films; from the City Directory, offering space in their new book; and, from Colonel E. L. Munson, thanking the Society for its splendid patriotic response. A summary showed forty-four willing to join the M. O. R. C. plus five additional ones already officers of the M. O. R. C. or National Guard.

Under New Business, the Metropolitan Films were referred to the Program Committee. It was unanimously voted to reject the offer of the City Directory to insert the names of the members of the local Society. Gundrum urged the co-operation of all doctors with the plan outlined by the School Physician for development in Physical Education.

The meeting adjourned to a half hour at the banquet table.

Those present included Gundrum, Soutar, Brown, Christman, Hale, Mullin, Grazer, Yates, Azevedo, W. Briggs, Snyder, Dillon, Wilder, Nahl, Fay, Ohanneson, McKee, Simmons, Brendel, Topping, Haworth, Beach, Titus, Drysdale, Reynolds, Norris, Jones, McKinnon, Harris, Scribner, G. J. Hall, Schoff, Thomas, Turner, Zimmerman, Stolle, Scatena, Bittner, Stern, Cress, Klick, Babcock and Reardan.

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### SAN BERNARDINO COUNTY

San Bernardino County Medical Society (reported by E. J. Eytinge, M. D., secretary-treasurer)—Meeting of the San Bernardino County Medical Society held at the County Hospital at 8 p. m., February 2.

Owing to the absence of the secretary, A. T. Gage served pro tem.

Owing to the rain there was a small attendance. About nineteen of our own members and fifteen guests being present. Program of the evening is appended.

1. The Mexican as a Medical Problem, by F. H. Pritchard. Discussion opened by Walter Pritchard.
2. The Treatment of Tuberculosis, by F. M. Pottenger. Discussion opened by C. L. Curtiss.

The following ten men were asked to come prepared to take a special part in the discussion:

V. C. Charleston, Needles; George W. Clark, San Bernardino; W. C. Clough, Loma Linda; C. L. Curtiss, Redlands; C. R. Campbell, San Bernardino; Lenore D. Campbell, San Bernardino; K. L. Dole, Redlands; A. N. Donaldson, Loma Linda; J. H. Evans, Highlands, and H. R. Evans, Trona.

Attention is called to the annual dues. Only forty-two members have paid, leaving fifty-two yet to settle. You are going to pay anyway, why not save the secretary and yourself trouble by mailing your check immediately.

Accompanying this notice is the revised Constitution and By-Laws with the Fee Bill. Errors or omissions should be reported to the secretary.

At the request of the California Association of Medical Milk Commissions, the president has appointed the following three men to serve as a County Milk Commission: C. F. Whitmer, Colton; K. L. Dole, Redlands; C. C. Owen, San Bernardino.

Meeting of the Board of Councilors of December 30: A. N. Donaldson, C. L. Curtiss, C. R. Campbell, K. L. Dole, C. P. Engel, Pritchard, F. F. Abbott present.

Discussion of the methods of Public Education.

Moved (Dole) seconded (Curtiss) that the County Society print in the various newspapers articles under the caption "Timely Medical Talks," these to be signed by the County Medical Society. Carried.

Motion by Curtiss that the County Society print in the papers a directory of the local physicians belonging to the Society. Carried.

Moved that the society buy as many County Emblems as can be disposed of among members.

Discussion of separation of names of regular physicians from the irregulars in telephone and city directories. Dr. Pritchard appointed by chair to investigate.

Engel introduces consideration of problem of patients going to County Hospital without having been seen by any local physician. No action. Adjourned.

Attention is again called to the question of "The History of California in Medicine." The letter from Doctor



Pollock should receive attention from the men qualified to help in this work.

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### SAN DIEGO COUNTY

**San Diego County Medical Notes** (reported by Robert Pollock)—A special dinner meeting was held at the Golden Lion Inn on February 9, drawing an attendance of over a hundred physicians. The guest of the evening was Dr. William C. MacCarthy, head of the Department of Pathology at the Mayo Clinic, Rochester. Dr. MacCarthy is an easy and forceful speaker and presented his subject of Gastric Ulcer and Carcinoma, which he illustrated by lantern slides, in a way to impress his hearers and will leave them with a clear vision of the salient points brought out.

Dr. William McK. Marriott, Professor of Pediatrics of Washington University, St. Louis, was the guest of the Scripps Metabolic Clinic for a few days early in February. On Saturday, February 6, at the close of a social dinner hour at the Casa de Manana, La Jolla, he entertained the Southern California Pediatric Society with an extremely interesting talk on feeding in infancy and childhood. This drew several score of enthusiastic pediatricians from various parts of the state.

On Tuesday, February 9, the members of the San Diego County Medical Society were the guests of Directors J. C. Harper and Milton A. McRae of the Scripps Metabolic Clinic at the Casa de Manana, La Jolla, where a well served dinner prepared them for the excellent address which was to follow. Professor Marriott presented to this audience a comprehensive outline of nephritis as it applies to children, discussing in minute detail the etiology, symptomatology, course and treatment of parenchymatous or tubular nephritis and glomerular or hemorrhagic nephritis. The doctor brought out quite strongly the points in differential diagnosis most requisite to a perfect understanding of the condition to be dealt with. He described in detail the blood and other tissue changes in each type and the basic principles of diet demanded by each. His talk was listened to with the keenest appreciative interest on the part of his large audience, which enthusiastically applauded his closure. We understand that it is the plan of the Scripps Metabolic Clinic to present to the San Diego medical public from time to time outstanding men in metabolic research who can be induced to visit the coast.

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### SAN JOAQUIN COUNTY

**San Joaquin County Medical Society** (reported by Fred J. Conzelmann, secretary)—The stated meeting of the San Joaquin County Medical Society was held Thursday, February 4, 1926, at the Headquarters of the Local Health Center, 129 South American Street, President H. S. Chapman presiding.

Forty were in attendance. Those present were: Drs. E. A. Arthur, N. P. Barbour, J. W. Barnes, E. L. Blackmun, J. T. Blinn, C. A. Broadbent, H. S. Chapman, F. J. Conzelmann, J. V. Craviotto, J. F. Doughty, L. Dozier, C. F. English, F. T. Foard, M. Goodman, E. C. Griner, L. M. Haight, S. Hanson, J. P. Hull, L. R. Johnson, S. E. Latta, Grace McCoskey, R. T. McGurk, A. H. McLeish, F. G. Maggs, S. S. Marnell, J. E. Oliver, B. J. Powell, H. E. Price, G. H. Sanderson, J. J. Sippy, M. Smyth, H. Smythe, L. E. Tretheway, J. J. Tully, G. J. J. Vischi, B. F. Walker, N. E. Williamson and Dr. Samuel H. Hurwitz, of San Francisco, speaker of the evening, and Dr. Winfred Beithan and Dr. G. E. Christesen, Public Health Officer of Payson, Utah, as guests.

The minutes of the previous meeting were read and approved.

The chair called for the report of the Board of Directors on Professional Publicity. The secretary then read the following recommendation of the Board of Directors: "That the Board of Directors recommend to the secretary that Mr. L. W. Drury of the 'Stockton Record' be granted permission to canvass the members of the Society, with the view of obtaining not less than 25 members to subscribe \$3.40 a month for the period of 12 months that the publicity appears in the 'Record.' The motion of Dr. Craviotto, that the report of the Board of Directors be adopted, was seconded and carried.

The chairman introduced the speaker of the evening,

Dr. Samuel H. Hurwitz, of San Francisco, who spoke on the subject "High Blood Pressure and Diet." The doctor stated that regulation of diet is important in the management of patients with high blood pressure. Proteins, or the purins derived from them, have lost some of the terror, and salt free diets have been changed to restricting the salt intake. It is important to recognize spontaneous variability in blood pressure, which is brought about by changes in the emotional state of the patient, and may vary from day to day, hour to hour, and minute to minute, before one can determine the success of therapy, dietetic or otherwise. Psychic causes may bring about a constriction of the blood vessels, and result in rapid changes in blood pressure. Physical and mental rest, together with good habits of eating and drinking, exercise, recreation, work, hobbies and the like, will reduce blood pressure. Effect of diet on hypertension, to be conclusive, must be carried out by eliminating the psychic element as far as possible. Essential hypertension occurs without arterial disease or lesions of the cardio-vascular or renal system. The hypertension of the menopause, and in diabetics, are examples of this. Cardio-renal complications may follow hypertension, but that is no reason that the primary cause for high blood pressure lies in the organs secondarily involved. In the dietetic management, with the object of lowering blood pressure, the nephritic and arteriosclerotic patients must be separated from the patient with essential hypertension. The speaker considered briefly the effect of proteins, carbohydrates and sodium chloride upon blood pressure, and also a diet of low total caloric value for the reduction of body weight. Protein intake should be reduced, but not abandoned. There are no absolute indications that proteins or purins derived from proteins have anything to do with the production of an increased blood pressure. It has been shown that 75 grams of protein a day are sufficient for a person of average weight. A reckless use of proteins in high blood pressure patients is no more justifiable than a reckless reduction of the protein ration. Better err on the side of sufficient protein than to risk insufficiency. Carbohydrates do not apparently change the blood pressure in any way, but the liability of diabetic patients to develop hypertension which has a tendency to lead to nephritic conditions must be kept in mind. It has been observed that excessive starch intakes, directly or indirectly, cause a rise in arterial tension, and in which reductions of the starches lead to lowering of the blood pressure. It is wrong to reduce proteins and increase the starches and produce over-weight. Allen observed that a rigid salt-free diet will bring about reduced blood pressure, relieve subjective symptoms, diminish danger of apoplexy, and check the progress of the condition, but other investigators reached the conclusion that the level of sodium chloride in the blood bears no relation to blood pressure, and that the ingestion of 10 grams of salt does not raise the blood pressure of patients with hypertension. Any patient with prolonged high blood pressure must be looked upon as a potential nephritic, and it is well to take a middle course, both with regard to proteins and salt. Diets with 2 and 3 grams of salt in the 24 hours has yielded good results in alleviating the characteristic morning headache so common in this condition, but it did not reduce the blood pressure. Hypertension and overweight in women at the menopause is probably due to endocrine disturbances. But the greatest group of hypertension is found in patients who eat much and exercise little. Where overweight is the chief impairment, the dietetic treatment is the most effective. Its therapy should be a gradual reduction with diet and exercise. Reduce without diminishing vitality and efficiency. A satisfactory diet for patients with hypertension should be simple, well balanced, no more protein than the actual needs of the patient—about one gram of protein per kilogram of body weight—the diet should be of sufficient caloric value for the energy requirements; it should be easily digestible, suitable to the powers of mastication of the individual, and free from meat extractives, condiments and salt.

The subject gave rise to a lively discussion, in which the following members took part: Barnes, Powell, Arthur, Williamson, Latta, Dozier, Barbour and McGurk. All agreed that every patient was an individual problem, and had to be individually studied to obtain best results.

The general trend of the physicians who discussed the subject was to the effect that the co-operation of the patient should be secured, and that he should be instructed that moderation must be his watchword in all things pertaining to his health. Dr. Hurwitz, in closing, stated that the problem was not a clean-cut affair, and that the ultimate solution of the problem was with the general practitioner. There is no specific remedy; psycho-therapy is important, when coupled with a judicious combination of warm baths, rest, massage, and a corrected diet. Drugs are helpful where there is a definite indication for them. Moderation in treatment is also a splendid word for the doctor.

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### SAN LUIS OBISPO COUNTY

**San Luis Obispo County Medical Society** (reported by G. David Kelker, M. D., secretary)—The monthly meeting of the San Luis Obispo County Medical Society was held on January 16, 1926, at San Luis Obispo. As is the usual custom the meeting was preceded by a dinner at the Hotel Andrews. There were nine members present and an equal number absent.

The meeting was given over chiefly to a discussion of the proposed change in the constitution and by-laws and as to the best methods to be employed in our relationships with the eligible M. D.'s in our county who are not members of our society. A committee composed of Drs. Fossum, Long and Kelker was appointed to either write or interview the eligible physicians in this county who are not members of our society and endeavor to secure their applications for membership.

The election of officers for 1926 resulted in the selection of the following: President, N. J. Shields, San Luis Obispo; vice-president, A. H. Wilmar, Paso Robles; secretary-treasurer, G. D. Kelker, Paso Robles.

The election of a delegate and an alternate to the 1926 convention of the California Medical Association resulted as follows: Delegate, G. L. Sobey, Paso Robles; alternate, T. S. Long, San Luis Obispo.

Doctors Sobey and Wilmar of Paso Robles have both recovered from the injuries they recently received in an automobile accident which might easily have proven very serious.

Dr. C. E. Fisher of King City, California, has located in Paso Robles, occupying the offices of the late Doctor Dresser, and opening a hospital to be known as the Paso Robles Hospital.

Dr. John E. Miller of Osterburg, Pennsylvania, is now located in San Luis Obispo, having taken over the practice of his brother, the late Byron Y. Miller, M. D.

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### SANTA BARBARA COUNTY

**Santa Barbara County Medical Society** (reported by Alex. C. Soper, Jr., secretary).—The regular meeting on February 9, 1926, was called to order by President Hotchkiss in the chair; present twenty-four members and two guests. Correspondence was read from the N. Y. Polyclinic regarding postgraduate courses, and from Victor G. Vecki, M. D. Report was made of the showing of two films loaned by the Metropolitan Life Insurance Company of San Francisco, at a local playhouse, and showing the value of annual physical examinations and the value of vaccination against smallpox.

The censors of 1925, Drs. Profant, Stevens, and Allen Williams were reappointed. Drs. Henderson and Ullmann were appointed as a program committee. It was decided to invite Dr. Vecki to address the Society on April 12th at our regular meeting.

A unanimous vote set the annual dues at twelve dollars, the same as last year.

W. D. Samson gave an extremely interesting resume of the recent work in "the use of high carbohydrate diets in diabetes mellitus," and Henry J. Ullmann showed interesting X-ray photographs of cavities injected with Lipiodol, especially clear in the negatives. Hotchkiss, Ullmann, Schurmeier, Rex Brown, Gray, and Means discussed Sansum's talk, and Robinson, Lewis, Hotchkiss, and Rex Brown, the Lipiodol subject.

### CHANGES IN MEMBERSHIP

**New Members**—Carlyle H. Pearce, Colfax; Mildred E. Thoren, D. H. Pettingell, Weimar; Samuel E. Ballard, George Berger, Francis E. Browne, Elizabeth Mason Hohl, Norman J. Kilborne, St. Claire R. Lindsley, Los Angeles; J. Barnard Nelson, Long Beach; L. H. Robison, Edward H. Anthony, Los Angeles; Carl R. Bishop, Long Beach; Alexander C. Cameron, Los Angeles; Finis G. Cooper, Huntington Park; Russell M. Farnham, Glendale; Karl Fischel, George B. Greenbaum, Edgar B. Spear, William Taylor Webber, Los Angeles; Axel W. Gustafson, Gustine; Earl H. Coleman, Gilbert A. Kelley, Fresno; Guy L. Edie (Associate), John H. Dorn, Marion H. Lippman, Felix L. Pearl, San Francisco; John Joseph Gomes, Kathryn Reuter, Swarts, Henry Wahle, Wm. J. Dailey, W. H. C. Hatteroth, H. J. Temple, R. B. Armitstead, Oakland; Leopold H. Fraser, Richmond; Harold P. Totten, Los Angeles; Harry L. Jenkins, Allan R. Watson, G. F. Norman, Eureka; O. B. Barron, Ferndale; James A. Mattison (Honorary), Soldiers' Home; John V. Greene, Joseph E. Pearis, S. J. McClendon, San Diego; Edmund Frost, Stockton; Loren R. Chandler, Harold E. Fraser, Harry L. Gardner, San Francisco.

**Transferred**—Geo. H. Sanderson, from Sacramento county to San Joaquin county; Chas. H. Lowell, from Los Angeles county to Monterey county.

**Resigned**—R. H. Kuhns, from San Francisco county, now Chicago, Illinois; George H. Richardson, W. T. Davidson, San Francisco.

**Deaths**—Du Pre, Barton Greene. Died at Los Angeles, February, 1926, age 36. Graduate of the Western Reserve University School of Medicine, Cleveland, 1916, and licensed in California in 1923. Doctor Du Pre was a member of the Los Angeles County Medical Society, the California Medical Association and the American Medical Association.

**Loughridge, James.** Died at Folsom, January 28, 1926, age 59. Graduate of the University Medical College of Kansas City, 1899. Licensed in California in 1913. Doctor Loughridge was an affiliate member of the Sacramento Society for Medical Improvement, the California Medical Association and the American Medical Association.

### JOHN W. CLINE

1860-1925

John W. Cline, 65, prominent Santa Rosa physician, died at his home December 24, 1925. His death was caused by nephritis and myocardial insufficiency. He was born in Defiance, Ohio, August 10, 1860. He graduated from the College of Physicians and Surgeons, Iowa, in 1881 and from Bellevue Hospital Medical College, New York, in 1894.

Of the forty-five years of active practice Doctor Cline practiced forty-three years in California, residing thirty-one years in Santa Rosa. He had served as president of the Sonoma County Medical Society in which he had always taken an active interest.

His kindness of heart won him the love and sincere gratitude of his patients. Doctor Cline was a man of high ideals and conscientious in the performance of duty.

### HENRY ELLIS SANDERSON

1858-1926

Henry Ellis Sanderson, a physician at the State Hospital for more than 30 years, died at Stockton, February 8, 1926, at the age of 68. Doctor Sanderson graduated from the University of California with the class of 1879, and from Cooper Medical College in 1885. He spent two years as an interne at Mt. Sinai Hospital, later going to Heidelberg, Germany, for a post graduate course and then to Vienna for further study. In 1891 he returned to California and became a professor in Cooper Medical College.

Doctor Sanderson was a member of the San Joaquin County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.



## Utah State Medical Association

T. C. GIBSON, M. D., Salt Lake City.....President  
 W. R. CALDERWOOD, M. D.....President-Elect  
 FRANK B. STEELE, M. D., Salt Lake.....Secretary

J. U. GIESY, M. D., Kearns Building, Salt Lake,  
*Associate Editor for Utah*

### SERVICE

A few years ago, during the recent war, how many homes in the country were displaying a little red and white flag with a blue star upon it—the service flag, a flag of honor—sign manual that from this house had gone one who served. And who is there who will deny that out of all life's values, service is one of the few enduring values—one of the few values that benefits him who gives and him who receives?

During the past month there died in Utah one of the oldest, if not the oldest, practicing physicians in the United States. Yet Dr. Harvey Coe Hullinger—physician, ex-soldier—served until he died. Two days before his death he rose from his bed to minister to the wants of a former patient, saying that the man needed his service and had traveled twenty miles to gain it, and might not be refused.

It is such things as this that bolster the faith of man in his fellow. And it is with such acts of unselfish service that the annals of medical history are filled. It is from such examples of unselfish service that the doctor's crown of honor is woven; that cause those who have benefited by his skill and service to remember him with a little tug at their hearts.

There is something wholly immaterial, something partaking of the divine and holy in the daily walk of the medical man who truly follows his craft. There is something of the divine in the smile of an unthinking infant returning to health. There is a holy quality in the light of a new made mother's eyes. There is something of the courage of the martyr in the act of the man who, forgetting his own mortal illness, seeks still on the brink of the grave to minister to someone else.

We do not feel that this is mawkish sentiment. We feel rather that in these days of commercialized—everything—from reform to religion—it might well redound to the honor of the medical profession to still hold the torch of service, as highly in the future as they have in the past.

### INFLUENZA

He opened the window and in-flew-enza. There's more than a joke about that. Like the poor, this darned disease seems to be always with us, and it plays merry hob with not only the ones of us who die, but a large percentage of the rest. Post-influenzal peribronchial conditions are no longer a negligible quantity, but are making up a large percentage of the bronchial and peribronchial conditions which we meet. Therefore it behooves the doctor to attack positively and sharply every case of this malady, however slight, which he may meet. The death rate from "wet lungs" during these epidemics which sweep the country all too frequently

is a bit appalling, especially in view of the fact that we can do so little after the lungs get "wet." As a result it would seem that the proper thing for the profession to do is to keep this wetness from developing from the start.

We hold no brief for any drug house or any system of therapy in the treatment of this disease. Our animus is simply to bring again to the profession a drug which it seems to us too few of us use. Essentially pulmonary involvements during the course of influenza may be described as a descending bronchitis. Once the infection involves the acini of the lung, that lung is going to become waterlogged. We were in the army during the epidemic of 1918-1919 and we've been practicing since, and we've had not one single adult death from influenza since we returned to private practice, and the drug we have used as an almost routine first attack has been ammonium salicylate. To us there appears to be a definite reason why this drug acts as it does not only as a curative agent but as a preventive means against pulmonary complication during the course of the disease. It is an alkaline—and ammonium salts are eliminated chiefly, according to the best authorities, through the kidney and lung. The German school long used them in the treatment of pneumonias of other types. Anyway, we want to call attention to this particular salt, and appeal to the profession to try it, and see if they will not be pleasurably surprised.

### WORK-UPS

Without trying to pull an Irish bull—we wonder to how many of the profession it has occurred with sufficient force to cause them to follow its leading, that the proper way to work UP a case is to begin at the TOP and work DOWN? With no intention of throwing any brick-bats, since our own house is of about the same percentage of glass as the other fellow's—we still feel that there is room for this question, mainly because we are so constantly meeting so many cases in which the entire "work-up" has consisted from all obtainable information in a few questions asked and a few cabalistic symbols and directions scrawled on a prescription pad. That in a measure was a method in vogue in a day when the profession wore frock coats and silk hats. But today with every modern means of assistance which we possess at the beck and call of the medical advisor, it is or ought to be more or less "out." Snap-shot diagnosis is almost as bad as the shotgun prescription. In fact, we think it's worse. Nothing happens in this world without a cause. If a patient is sick "there's a reason," to quote the words of the late Mr. Post. And it's up to the doctor who really deserves the name to find it, when the problem presents itself. To do anything else is about as near obtaining money under false pretenses as anything of which we know which is at present legalized.

Utah Notes (reported by J. U. Giesy, Associate Editor)  
 —President Gibson reports the appointment of the following personnel for the advisory committee, medical department, University of Utah: F. A. Goletz, chairman; Clarence Snow, J. J. Galligan, D. C. Budge, H. P. Kirtley, F. F. Hatch, F. H. Raley, W. G. Schulte, J. R. Morrell, J. C. Landerberger and E. G. Hughes, of the council; T. C. Gibson, president; W. R. Calderwood, president-

elect; F. B. Steele, secretary; J. U. Giesy, associate editor, CALIFORNIA AND WESTERN MEDICINE.

The sympathy of the entire medical fraternity of the city and state goes out to F. F. Hatch, in the loss of his wife. Mrs. Hatch died of influenza pneumonia, during the past month. Her final illness was sudden and brief. Funeral services were conducted by the Eastern Star, of which she was a member, Sunday, January 31.

Dr. George Edgar Robison, physician and x-ray specialist of Provo and Salt Lake, died of pneumonia that followed an operation for internal injuries suffered two weeks ago. Funeral services were held at his former residence in Provo, Utah, under the direction of the Masonic Order, Story Lodge No. 4, of which he was a member.

Dr. Alexander William Shields of Huntsville, former physician at Ogden for fourteen years, died recently. He is survived by his widow, Ella Catherine Kimball Shields, and one son, James Bruce Gordon Shields, a student at the Ogden high school.

Harvey Coe Hullinger—Although 101 years old when he died January 29, the oldest practicing physician in the United States, the oldest member of the Latter-day Saints church and probably the oldest man in Utah, Dr. Harvey Coe Hullinger, during the three months' illness preceding his demise, frequently arose from his bed to attend his old patients. He had practiced in the Uinta Basin for forty-two years and had many patients who would see no one else. He got up in a weakened condition the day before he was taken to his son's home and served a patient who had come twenty miles to see him. Upon being remonstrated with, he said:

"This man has come a long distance and I have been his family physician for nearly half a century. It is my duty to serve my patients for they depend upon me." Funeral services were held at the L. D. S. Tabernacle with Witbeck Post No. 11 acting as guard of honor. A squad of World War veterans fired a salute at the grave, as Dr. Hullinger had been one of the first to answer Abraham Lincoln's call for volunteers in 1861. Six great-grandsons of Dr. Hullinger acted as pallbearers.

Dr. Daniel S. Taplin died recently at the family residence, 134 Harrisonville road. He is survived by his widow, Mary E. Taplin, four step-children, a sister and one brother. Funeral services were held in the Fifteenth ward chapel at Ogden.

Seven applicants to practice medicine and surgery in Utah were granted licenses by the director of registration. They are: William Elza Wright and Robert C. Kirkwood of Salt Lake, Dimon Keith Barnes of Kaysville, Charles Everette Stevens of Loa, Edwin P. Deal of Bingham, John Floyd Wikstrom of Ogden, George Russell Aiken of Hurricane, and Albert B. Gray of Denver, Colorado.

The month was marked by the visit of William F. Wild of New York, representative of the American Society for the Control of Cancer. Doctor Wild has been sent through the western states to meet with the various medical societies and doctors and deliver addresses to various medical clinics. While here he spoke at the regular mid-week luncheon of the chamber of commerce.

Salt Lake County Medical Society (reported by M. M. Critchlow, secretary)—A regular meeting of the Salt Lake County Medical Society was held January 25, 1926, with President F. H. Raley in the chair. There were forty-five members and seven visitors present. J. P. Kerby spoke on "Osteitis Deformans." He gave a resumé of the literature and presented the case histories and x-ray findings of three of his patients. Another patient was presented by L. N. Ossman. Lantern slides were shown to illustrate the x-ray findings.

W. F. Beer and S. C. Baldwin took part in the discussion and presented x-ray films of a possible case of osteitis deformans in a child 15 years old. Further discussion was given by A. L. Heuther and H. C. Holbrook.

L. J. Paul, regional manager of the Utah Regional Office of the U. S. Veterans' Bureau, read an essay on "The Relationship of the Veterans' Bureau to the Medical Profession." He discussed the new rating table and the

class of patients entitled to treatment at the hands of the bureau.

This paper was discussed by L. N. Ossman, W. R. Tyndale and A. A. Kerr.

The applications of A. H. Taylor and H. A. Dewey were voted upon and they were unanimously elected to membership. The applications of Thomas D. Rees and H. M. R. Ehlers were read and turned over to the board of censors.

President Raley announced that the Mountain States Telephone and Telegraph Company would like the society to hold a meeting there and be shown over the building. The decision was left with the program committee.

The meeting of February 8 was held at the Division building of the Mountain States Telephone and Telegraph Company. Eighty-eight members and seven visitors were present.

No clinical cases were presented.

The first paper on the scientific program was read by Guy Van Scoyoc on "The Ring Test in the Diagnosis of Tuberculosis," a report of 309 cases. He described the test and his results in known cases and doubtful cases and concluded it was of distinct benefit in the diagnosis of incipient tuberculosis. His paper was discussed by T. A. Flood, R. T. Jellison, C. Elmer Barrett, T. C. Gibbons and L. E. Viko.

The second paper was read by A. C. Callister on "Angiospasm and Angiospastic Neuroses." He described the various diseases under these headings, present treatment and results of treatment by periaxillary sympathectomy and described the technic of the operation.

Discussion by E. F. Root, A. Lipkis, who advocated x-ray therapy; G. G. Richards, W. F. Beer and G. H. Pace.

Herbert R. Edwards of the National Tuberculosis Association talked on the work on the research council of the association, chiefly the work on the chemistry of tubercle bacilli, the function of the monocyte and research on reticulum.

Thomas D. Rees was elected to membership in the society.

F. B. Steele read a telegram of William C. Woodard, head of the legal department of the American Medical Association, to the effect that Senators Smoot and King of Utah fought the reduction of physician's income tax.

A motion was carried directing that telegrams be sent to Senators Smoot and King stating that it is the opinion of the Salt Lake County Medical Society that the senators should support deductions from income tax returns of expenses incurred in post-graduate work and attending medical conventions.

President Raley introduced Mr. M. R. Cahoon, state commission superintendent of the Mountain States Telephone and Telegraph Company, who had a demonstration given of the way telephone calls are completed. Then the members adjourned to the main building of the telephone company where the switchboard was demonstrated and explained, after which refreshments were served by the company.

**THE DATES ANNOUNCED FOR THE UTAH STATE MEETING ARE MAY 6-7-8, 1926. PASTE THIS IN YOUR HAT AND WATCH FOR ANNOUNCEMENT OF PROGRAM IN THE NEXT NUMBER.**

"Medical meetings are very essential to the practice of medicine," relates C. L. Hustead (Neb. Med. Jour., Feb., 1926). "They stimulate the physicians to more study and better work. It is a well known fact that the fellow who stays by himself gradually sinks into a rut and he cannot improve unless he has someone to pattern after."

"In order to have a successful medical society we must have good attendance and good fellowship, and good fellowship cannot be cultivated unless we can get the fellows together. Practically all of my doctor friends have been made at gatherings of this kind where we mingle together and become acquainted with each other."

Here is a good reason for attending the 1926 session of the C. M. A. in Oakland, April 26 to May 1. Why not also spend the preceding week at the A. M. A. session at Dallas?



## Nevada State Medical Association

A. J. HOOD, M. D., Elko.....President  
 HORACE J. BROWN, M. D., Reno.....Secretary and Associate Editor for Nevada

California and Western Medicine is the accredited publication of the Nevada Medical Association. In addition, this very energetic medical association issues a post-card bulletin to its members, semi-monthly. One of the recent copies of this bulletin contains the following:

"Our retiring secretary informs us that several members neglect to pay their dues until the end of the year and then wonder why they do not receive CALIFORNIA AND WESTERN MEDICINE. You know that your seven-dollar dues include subscription to that very excellent journal, and you can't afford to miss a single issue of it, but we can't order it sent to you until we have your dues so that we can send in the mazuma to the unrelenting tight-fisted editor, he just won't stand for it. . . . Try to laugh that off. Better send in your dues right away and be happy for the rest of the year."

It is not the parsimony of the editor that causes subscriptions to CALIFORNIA AND WESTERN MEDICINE to be cancelled when they expire, but it is the requirements of the Federal Postal Laws which, however generous we might be inclined to be personally, we do not feel it advisable to violate. In any event, members of the Nevada Medical Association, your efficient secretary and editor, Dr. H. J. Brown, needs your annual dues, without which no physician may remain in good standing either in his county, state or national medical organizations.

**President Hood of the Nevada Medical Association** has appointed the following committees:

**Membership**—Beaumont Brown, A. C. Olmsted and Hal L. Hewetson. **Judicial**—M. A. Robison, R. A. Bowdle, E. E. Hamer, R. R. Craig, and W. H. Brennen. **Scientific Work and Program**—V. A. Muller, C. W. West, and H. A. Paradise. **Necrology**—J. E. Worden, Mary H. Fulstone and D. L. Shaw. **Entertainment**—S. K. Morrison, W. L. Samuels and A. J. Hood, Reno. **Public Health and Education**—Henry Albert, W. A. Shaw and M. R. Walker. **Military Affairs**—The president, vice-president and secretary. **Trustees**—A. P. Lewis, George F. Pope and W. A. Shaw. **Council**—G. L. Dempsey, C. E. Bullette, W. L. Howell, J. R. Eby, J. C. Cherry, W. H. Brennen, C. E. Sweezy, G. L. Belanger, J. H. Hastings, J. T. Reese, D. A. Smith, P. D. McLeod, W. J. Circe, F. M. West, W. H. Riley, H. L. Dalby and M. J. Rand.

At the January meeting of the Elko county board of commissioners, A. J. Hood was appointed county physician and J. E. Worden county health officer for the year 1926.

The following officers have been elected for the year by the staff of the Elko General Hospital: J. R. Eby, chief of staff; C. E. Secor, vice of staff; John E. Worden, secretary. At this meeting C. E. Secor read a paper on leucopenia.

On January 12 the Elko Medical Society elected the following officers for 1926: President, H. A. Paradis, Montello; vice-president, R. P. Roantree, Elko; secretary-treasurer, J. E. Worden, Elko; councillor, C. W. Eastman, Carlin. After the meeting a banquet was served at the Mayer Hotel cafe at which the following were present: A. J. Hood, J. R. Eby, W. A. Shaw, A. C. Olmsted, H. A. Paradis, R. P. Roantree, C. E. Secor, C. W. Eastman, R. W. Avery and John E. Worden.

Earl L. Creveling, formerly of New Jersey, has recently located in Reno and is associated with J. LaRue Robinson.

The Washoe County Society has elected the following officers for the ensuing year: President, Henry Albert; vice-president, C. W. West; secretary-treasurer, John A. Fuller.

**The Washoe County Medical Society** (reported by John A. Fuller, secretary)—Met February 9, 1926, at the home of C. E. Piersall, under the presidency of Henry Albert.

The application for membership of Earl C. Creveling,

having been recommended by censors, was placed before the meeting and he was unanimously elected.

The application of S. M. Sproat of Portola, California, having been recommended by the censors, upon motion of Bath, he was unanimously accepted as a member of the society.

The personnel of the certified milk commission was announced by President Albert as follows: George Servoss, chairman; Alice Thompson, John A. Fuller.

This meeting being primarily a meeting in memory of J. E. Pickard, recently deceased, the subjoined resolution in memoriam signed by Robinson, Richardson and W. H. Hood was presented.

This was followed by a touching and appropriate eulogy of Doctor Pickard, by Thomas Bath.

**Program**—The paper of the evening, "Clinical Aspects of Goiter," was presented by Vinton A. Muller, who discussed the varieties of goiter and dwelt principally on Grave's disease, discussing the treatment from the points of view of the surgeon, the physician, and the radiologist.

The paper called forth an unusual amount of discussion; Piersall from the point of view of the radiologist, Morrison of the physicians, MacLean of the surgeon, Henry of New York of the psychiatrist, and J. L. Robinson of the ophthalmologist. M. A. Robison and Horace Brown cited cases of local infection as etiological factors in disease.

V. A. Muller, chairman of the committee on goiter prophylaxis, reported that iodination of Reno's water supply would be impractical on account of the cost. They recommended the supervised use of iodostarin tablets among the school children. Morrison moved that the report be accepted and that the committee be instructed to confer with the school trustees relative to the matter.

President Albert thanked Piersall in behalf of the society for his hospitable entertainment of the society. The next meeting would be held in Fuller's office.

Members present: W. H. Hood, Piersall, Blake, Lehnars, Servoss, Samuels, Muller, MacLean, DaCosta, Robinson, Robison, Morrison, Bath, Brown, Albert and Fuller.

Visitors: Henry of New York, and Gregory.

### IN MEMORIAM

JAMES E. PICKARD, M. D.—Born July 14, 1856; died January 27, 1926.

*"Can storied urn or animated bust  
 Back to its mansion call the fleeting breath?  
 Can honour's voice provoke the silent dust,  
 Or flattery soothe the cold dull ear of death?"*

Doctor Pickard, while apparently recovering from a minor accident, was visited without warning by the grim reaper who came to claim him as his own. "The silver cord was loosened and the golden bowl was broken." Death caught up his spirit and on silent wings he passed out to that bourne from whence no traveler has e'er returned.

For the past thirty-four years Doctor Pickard has been an honored citizen of this, his adopted state, and a beloved member of the medical profession of Nevada.

Doctor Pickard had high medical ideals, and those he successfully followed. Sordid gain wrung from the penury of the poor never was his. The pathetic appeal for professional assistance, coming to him in the most part from those tossed on the troubled sea of life, never was unheeded. Cheery of countenance, hopeful of speech, wise in counsel and honest with all, these were some among the many traits of his splendid character. No encomium or eulogy that pen can write or tongue can tell can add to or detract from that which has passed. Ruthless ambition has spurred conquerors on to glory, but only through the sacrifice of life. For such the world is full of bronze and pillar shafts that stand in mute testimony of the rapin and ruin that produced them. But this humble servant of the people has through his untiring charity and skill, built for himself thousands of monuments in his long years of toil—monuments of love in the hearts of those he served—monuments where the family of little ones had not lost the mother or the father or other loved one. Where his



JAMES E. PICKARD

aid and skill closed the door of the tomb and bade the specter abide his time.

Ambition for political place, for social prestige, for wealth to win at the expense of others never was his choice.

*"Let not ambition mock their useful toil,  
Their joys and destiny obscure.  
Nor grandeur hear, with a disdainful smile,  
The short and simple annals of the poor."*

Doctor Pickard was an ideal type, a true doctor of the old school. He was both physician and surgeon. Ian MacLaren, in his lovable book, "Beside the Bonnie Brier Bush," draws a beautiful picture of this type of physician in his William MacLure. He tells how that this plain kindly man looked after the people of the glen in the northern highlands for forty years. Day and night, through the snows of winter and the heat of summer, he was always the minute man on call. This unpretentious doctor showed the honor of his code as a true man when he said to Tammas, as his wife lay at the point of death, "Tammas, ma puir fellow, if it could avail, 'a tell ye, 'a wud lay doon this auld worn oot ruckle o' a body o' mine juist tae see baith sittin at the fireside and the bairns round ye." Is it any wonder that the queen's surgeon took MacLure by the hand and said, "Doctor MacLure, I am glad to meet you. You are an honor to the profession." Doctor Pickard was an honor to his profession. By honoring his profession he gave medicine and surgery a great uplift in Nevada.

Our colleague was happy in his environment. He chose well his place and his people. Fortunate, indeed, is he whose environment is well placed.

In the days of the great Comstock, where Doctor Pickard made his debut into Nevada, as I have heard him say, there he met many great men—men of great affairs—men of capacity. Associated with such as these there could be nothing more gainful, and I am sure that Doctor Pickard was to them as they were to him, mutually helpful. I am sure that this was Doctor Pickard's attitude all

his life to his social environment, a desire to return as much as he received.

Much could be said without saying all. He has passed as a fleeting shadow out from among us. Yesterday he was with us in the flesh. Today naught else of him remains but the dust of mother earth. Yet as Longfellow has beautifully said, "Dust thou art to dust returnest, was not spoken of the soul." I fancy I can see the Warden of the Western Gate through which all must pass, saying to the spiritual Pickard:

"Come hither friend, for I perceive that thou art among those that served their fellowman. For such as thou there is a place and a reward. I hereby bestow upon thee this crown. It is the mark of distinguished service of those who bore the cross below. Thy way to that Elysian Land is now secure. There thou shalt find a new life and eternal. There will be no sorrow there. No night, no parting, no death. There are many mansions in that country for such as thee, and in them thou shalt dwell forever. To that place thou wilt be guided by celestial spirits. Pass on and be at peace."

#### To Mr. A. E. Pickard

Members of the Washoe County Medical Society wish to express to you and your family the sympathy they feel over the death of your beloved brother, Doctor J. E. Pickard.

During the many years of his membership in our society and our associations with him, we found him, always, willing to help with his great medical wisdom—always kindly, critical, quick and just in his decisions—charitable in all his acts—a friend to every one.

To his associates Doctor Pickard gave unlimited interest in their problems, enthusiasm in their success and an unwavering loyalty.

Therefore, be it resolved by the Washoe County Medical Society that in the death of Doctor Pickard the society has lost an inspiring, resourceful, tireless worker. And we, his associates, have lost a beloved friend.

M. A. ROBISON.

R. H. RICHARDSON.

W. H. HOOD.

Committee.

The twelfth annual meeting of the Medical Women's National Association will take place April 18 and 19 at Dallas, Texas, in conjunction with the American Medical Association meeting.

The headquarters of the M. W. N. A. are the Hotel Baker. May Agness Hopkins, Medical Arts Building, Dallas, Texas, is the chairman of the committee on arrangements.

Women intending to go to this meeting should promptly make reservations either through Doctor Hopkins or directly at the Baker Hotel, as there will be a large crowd there. Hotel rates are reasonable, a double room with bath averaging \$6.

The terms for railroad transportation should be looked up in the American Medical Association Journal, but in many places where there are large numbers of members of the Medical Women's National Association, special cars for the women may be run.

Medical women passing through New Orleans are specially invited to stop over there and will meet with a cordial welcome from the New Orleans medical women, represented by Dr. Elizabeth Bass, 3513 Prytania street, who is president of the Women Physicians of the Southern Medical Association.

The Texas women, co-operating with the chairman, Doctor Hopkins, are making most attractive arrangements for the meeting. All medical women, whether members of the M. W. N. A. or not, are most cordially invited to participate in this meeting.

Even at the risk of reducing the attendance at the scientific meetings of the 1926 session of the California Medical Association, to be held in Oakland April 26 to May 1, inclusive, attention is called to the fact that there is going to be some great golf played during the week, with trophies that both northern and southern California are going to strive to win.

HAVE YOU PAID YOUR 1926 DUES?



## READERS' FORUM

Selected short letters and abstracts from longer communications from readers are published when they remain within the bounds of decorum and law and contribute anything of value. Hereafter the name and address of the writer will be given. A pen name will be published on the author's request, and letters to the editor not intended for publication should be marked "personal."

San Francisco, February 16, 1926.

DEAR EDITOR:

I noticed the suggestion in the current (February) issue of the Journal that California members attending the American Medical Association session leave on special trains. I think this an excellent idea and would like to be notified if this is carried out.—William E. Stevens.

DEAR DOCTOR:

This was only a suggestion. I suspect that, if given authority, the railroad people would work up the idea.—Editor.

Chicago, January 20, 1926.

"I have just finished looking over the current number of CALIFORNIA AND WESTERN MEDICINE. It seems to me that this journal makes definite improvement each month. In my judgment you are doing a splendid work."—O. W.

TO THE EDITOR:

We wish to thank you for the news item you gave us in the last issue of CALIFORNIA AND WESTERN MEDICINE and assure you we appreciate such helpful service to advertisers. Will you please mail me another copy of the January issue?

NILES HOME FOR THE AGED, J. SHULTS.

Los Angeles, February 17, 1926.

DEAR EDITOR:

Your note relative to my suggestions that the date of the annual meeting be printed on the outside cover is at hand.

I find another memorandum on my desk that I intended to take up with you. It is to the effect that you print on the front cover, perhaps on the bottom of the page, this legend, "For complete index of contents see page —." When one picks up a journal, it is always a distinct convenience to have on the outside cover the reference to the page on which the itemized index can be found.

Along the subject of suggestions, I would call your attention to the back edge of the Journal of the American Medical Association. Some years ago I wrote to George Simmons, suggesting that they print the page numbers of each issue, and this has been done, and it makes for much more ready reference to articles in case one desires to look up a subject. I do not know whether it is so important in a monthly journal like CALIFORNIA AND WESTERN MEDICINE, but it might be worthy of consideration at any rate. Cordially yours,

GEORGE H. KRESS.

*Note*—Both suggestions by Doctor Kress are good ones and will be carried out. Constructive suggestions, calculated to increase the usefulness of CALIFORNIA AND WESTERN MEDICINE, are always gratefully received.—Editor.

In connection with Dr. John W. Shuman's article about laboratory medicine published in CALIFORNIA AND WESTERN MEDICINE some months ago, Dr. William Fletcher, director, Institute for Medical Research at Kuala Lumpur, Federated Malay States, writes:

"I am particularly interested. Our young men are very prone to think that their responsibility ends when they put a specimen in the post box and that they can sit in a chair and wait for the diagnosis to come by next mail."

An optimist is a man who rejoiced in having a wooden leg because he could hold up his socks with thumb tacks.

## CALIFORNIA BOARD OF MEDICAL EXAMINERS

C. B. PINKHAM, M. D., *Secretary*

According to the Los Angeles Express of February 3, 1926, Dr. C. L. Ahrens was the object of a complaint issued by the district attorney's office, charging him with ten counts of failure to report contagious diseases to the health department. "In the event he is found guilty, he will face a sentence of six months in jail or a \$500 fine on each one of the counts."

According to the Pasadena Star News of January 20, 1926, R. H. W. Albrexstondare was brought to Pasadena on January 19 from Santa Ana, where he had completed a six months' term in the county jail following his conviction of a violation of the Medical Practice Act. A similar charge has been pending in Pasadena since March, 1924. A clipping relates: "While the authorities especially delved into Doctor Albrexstondare's asserted claims to several wealthy financial backers that he could 'manufacture' a human body, a figure six inches in length . . . the claims of the Pasadena woman were divulged in the records of the Superior Court. . . . In the court record relating to the suit for the recovery of \$13,800 from the 'doctor' it was revealed that Miss McFadden of Pasadena was represented to have been the alleged victim. . . ."

The "Beauty Specialists" were recently reported to have secured a charter from the state permitting a certain beauty parlor to grant degrees following a course of instruction in the beauty parlor. "For masters of beauty technique we (they) would like a degree M. B. C., meaning master of beauty culture, and for the beginner, the degree B. B. C., meaning bachelor of beauty culture." This perchance is a sequel to the beauty culture bill, which created considerable comment during the last legislative session.

The annual report of the Board of Osteopathic Examiners shows that ninety-seven certificates were issued during the year 1925, forty-nine having been issued to practitioners from other states and Missouri led the list. Pleas of guilty for violation of the Medical Practice Act were reported to have been obtained from G. W. McFadden, P. B. Richards, Los Angeles, and W. F. Zahn, San Diego, while the case against E. V. Bergquist of Fresno was dismissed on his agreement to leave the state. (The records of the Board of Medical Examiners show the drugless practitioner application of Edward V. Bergquist, a graduate of the Universal Sanipractic College, Seattle, was denied.) The report also shows that the "certificate of Edwin A. Leatherwood was revoked by the board on a charge of aiding and abetting an unlicensed person." (The transcript of the hearing of Bishop Wilbert LeRoy Cosper, convicted of violation of the Medical Practice Act in the county of Contra Costa, shows the testimony of E. A. Leatherwood as connected with the case.)

According to the St. Louis Star of December 21, 1925, "Dr. Waldo Briggs, dean and owner of the St. Louis College of Physicians and Surgeons, the charter of which the state now is seeking to cancel, today lost in the Circuit Court his fight to retain his license to practice medicine in Missouri. . . ."

According to the Santa Ana Register of January 2, 1926, the annual report of the Board of Chiropractic Examiners shows that "for the fiscal year ending June 30, 1925, the board issued 894 license certificates. . . . A previous board had granted 252, making a total of 1146. The board announces that in the interests of public welfare, it will probe any chiropractic institutions in the state which appear to be 'diploma mills.' If the courts hold that the Chiropractic Act does not delegate such powers to the board, then it will be necessary in the future to more thoroughly investigate each applicant for licensure. . . ." "News items" in a previous issue drew attention to a recent decision by the Superior Court of San Francisco county, holding that the Chiropractic

Initiative did not give the board authority to investigate schools.

Jose Furtado da Silva of Oakland was recently convicted of practicing medicine without a license by a jury in the Superior Court at Santa Barbara and thereafter paid a fine of \$250.

Recent newspaper reports mention the trial of John C. Dysart in the Federal Court of El Paso, Texas, reported indicted on a charge of using the mails to defraud.

The San Francisco Examiner of August 13, 1925, relates: "In 1914, Doctor Dysart was arrested in Los Angeles on a charge of passing a fictitious check. In 1919 he was convicted of violating the Harrison Narcotic Act, sentenced to five years in the federal prison and pardoned by President Wilson, after serving four months of his sentence."

The Fresno Bee of January 22, 1926, relates that John F. Gebhardt and Frank W. Faircloth, referred to in a report from Special Agent Henderson, also in "News Items" in the February issue of CALIFORNIA AND WESTERN MEDICINE, were fined \$600 each and given suspended jail sentences of six months by Superior Judge Charles R. Barnard in Fresno, who also ordered them to return to Mrs. Emily Howard a fee of \$500, which they had charged her for an "eye treatment."

The St. Louis Star of January 29, 1926, relates that Bishop Helmuth P. Holler, recently convicted in Washington, D. C., of conspiracy to use the mails to defraud in connection with the operation of Oriental University, local diploma mill which he headed, was sentenced to two years in prison and fined \$1000. Dr. Robert Adcox and Sam Kaplan, co-defendants, pleaded guilty and are serving terms of forty days each.

According to the Englewood News of January 7, 1926, Dr. Robert Kelso was charged with practicing for about two years in California without registering his certificate, pleaded guilty and was fined \$100. The day previous "the doctor was arrested on complaint that he failed and refused to file the birth certificate of the child of Mr. and Mrs. John Gilbert, for which he was given a suspended sentence."

According to the San Francisco Examiner of January 23, 1926, "Dr. F. K. Lord, Ceres physician, found guilty by a Justice Court jury of administering morphine in excess of the limit allowed by law," had prepared an appeal to the Superior Court. Dr. Fred K. Lord has been cited to appear before the Board of Medical Examiners at the coming March meeting to show cause why his license should not be revoked on a charge of habitual intemperance.

According to the Modesto Herald of January 27, 1926, Dr. L. H. Wolfson pleaded guilty to a charge of violation of the Narcotic Law and was fined \$200 by Justice J. M. Gondring.

"Trial of A. A. Zimmerman of Richmond, accused of violation of the State Chiropractic Act, is scheduled to be held before Justice of the Peace John Roth in Richmond on Thursday. H. A. Miller, special agent for the State Board of Chiropractic Examiners, charged Zimmerman practiced without a license. . . ." — San Francisco Chronicle, January 13, 1926.

A recent decision rendered by Attorney-General U. S. Webb holds that chiropractors are not authorized to use electro-therapy, hydro-therapy or electronic methods under the provisions of the Chiropractic Initiative. "The x-ray, stethoscope and neuro-calcometer may be employed but only for diagnoses."

Dr. H. H. Heddens, referred to in prior issues of "News Items," was recently held to answer to the Superior Court of Kern County for trial under \$1500 bail, on a charge of violation of the Medical Practice Act.

T. How Wing, a Chinese herbalist of Los Angeles, recently paid a fine of \$100 on a charge of violation of the Medical Practice Act.

**Annual Report, Board of Medical Examiners**—The secretary, in commenting on the activities of 1925, quotes an article published in the Journal American Medical Association, May 30, 1925, complimenting the Board of Medical Examiners of California for their active and vigorous campaign against pseudo doctors and their disciplining of those licensed to practice in California, who have been guilty of violation of the laws of our state. Reference is made to irregularity in issuing of diplomas by California corporations, and the incorporation of a clause in Section 14 of the Medical Practice Act which permits the Board of Medical Examiners to revoke the licenses of those found guilty after a hearing before the board, of the purchase, sale, altering, or fraudulent use of any diploma, document, etc., in connection with an application for a license to practice in this state. Comment is also made on the national diploma mill developments and the conviction of "Bishop" Helmuth P. Holler by the Federal Court, Washington, D. C., for the misuse of the mails in connection with the activities of his so-called "Oriental University."

Three certificates were restored during the year 1925.

Six hundred eighty-four applications of all classes were filed, there being a decrease as compared with the record of 1924, particularly in reciprocity applications. However, graduates of medical colleges in increasing numbers applied for written examination. Six hundred sixteen certificates of all classes were issued, of which 293 were issued to physicians and surgeons after written examination, 264 being issued to physicians presenting qualifications from other states. Analysis of the distribution of applicants for reciprocity demonstrates (as compared with 1924) that Illinois, ranking third in the United States in the total number of physicians licensed, has again sent to California the largest number of successful applicants. New York, which shows the largest registration of physicians in the United States, sent us the second largest group, while Pennsylvania, showing second largest registration of physicians in the United States, sent us but nine during 1925 compared with sixteen during 1924.

Thirty-seven California licentiates left California, successfully obtaining reciprocity licenses in other states.

Written examination statistics show that graduates of California medical schools still maintain a high standing, Stanford University and the University of California showing a perfect score, the latter not having a failure recorded for the past sixteen years. Certificates were issued ten drugless practitioners, ten chiropodists, and seventeen midwives, all after written examination.

Seventeen licentiates were called before the board for hearing on various charges, the largest number for any one charge being ten for narcotic violation. After hearing, six certificates were revoked, six were granted probation, and five are pending final disposition.

The legal report of the north and south shows considerable activity in investigation and prosecution of those who are alleged to prey upon the sick and afflicted. The northern report shows forty-eight cases handled with eleven guilty, and the southern report shows seventy-six cases handled, with forty-four guilty. In commenting thereon, our special agent in the south relates:

"As fast as the crop of violators is harvested, however, others are growing up; there seems to be an endless supply. And the most remarkable thing about it all is the fact that no matter how utterly ridiculous the system practiced by some of these fakers, there are always plenty of patients who are willing to pay enormous prices for their treatments."

Sixteen licentiates recorded a change in their name (the majority by marriage) during the year just passed.

One hundred forty-eight of those licensed to practice in this state died during the past year, and sixty-eight graduates of medical colleges who were not licensed in this state were reported to have died in California during the year just closed.

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Requests to purchase additional copies of different issues of California and Western Medicine forces us to make a wholesale price, which will be \$5 for twelve copies, instead of the usual retail price of 50 cents a copy.



## M. O. R. C.

Ninth Corps Area—California, Nevada, Utah, Wyoming, Montana, Idaho, Washington, Oregon, and the territory of Alaska.

Both the Alameda and Los Angeles County Medical Societies have lately passed resolutions supporting the Medical Reserve Corps and urging their members to join. Similar action had previously been taken by the San Francisco, Sacramento and San Diego County Medical Societies in California, and by similar organizations in other states.

What about other county medical societies?

Col. E. L. Munson, surgeon, Ninth Corps Area, informs us that there have been "gratifying additions to the enrollments from San Francisco recently." That isn't enough. We must have gratifying enrollments from all parts of California.

The following tables give an outline of the Medical Reserve Corps situation throughout the Ninth Corps Area generally, and in the San Francisco and Los Angeles County Medical Societies in particular:

Distribution by states of Medical Reserve Corps officers, Ninth Corps Area, on January 31, 1926:

STATES	No. of physicians registered in state.	No. of Medical Reserve Officers each state should furnish	Percentage of total required	No. of Medical Reserve Officers enrolled	Percentage of total required
California .....	7,549	1,243	60.7	586	47.14
Washington .....	1,756	289	14.1	167	58.1
Oregon .....	1,158	191	9.3	150	78.53
Montana .....	568	94	4.6	71	76.4
Utah .....	497	82	4.0	90	109.75
Idaho .....	452	75	3.6	39	52.0
Wyoming .....	263	43	2.1	30	69.7
Nevada .....	140	23	1.1	10	43.4
Alaska .....	60	10	0.5	2	20.0
Total .....	12,443	2,050	100.0	1,145	55.85

#### Summary of Medical Reserve Corps in Ninth Corps Area, State of California, and San Francisco County Medical Society.

1. Physicians licensed to practice in eight states and Alaska comprising the Ninth Corps Area.....	12,443
2. Medical Reserve Corps Officers required from Ninth Corps Area.....	2,050
3. Physicians licensed to practice in State of California (61% of total of corps area).....	7,549
4. Quota of Medical Reserve Corps Officers required from California.....	1,243
5. Medical Reserve Officers enrolled from State of California (47.1% of quota).....	586
6. Quota deficiency of California (52.9% of quota).....	657
7. Members of San Francisco County Medical Society.....	828
8. Proportionate number of M. O. R. C., San Francisco County Medical Society should furnish.....	137
9. Total Medical Reserve Officers, and applicants, furnished by San Francisco County Medical Society.....	37
10. Quota deficiency for San Francisco County Medical Society (73% of quota).....	100

#### Summary of Medical Reserve Corps in Ninth Corps Area, State of California, and Los Angeles County Medical Society.

1. Physicians licensed to practice in eight states and Alaska comprising the Ninth Corps Area.....	12,443
2. Medical Reserve Corps Officers required from Ninth Corps Area.....	2,050
3. Physicians licensed to practice in State of California (61% of total of corps area).....	7,549
4. Quota of Medical Reserve Corps Officers required from California.....	1,243
5. Medical Reserve Officers enrolled from State of California (47.1% of quota).....	586
6. Quota deficiency of California (52.9% of quota).....	657
7. Members of Los Angeles County Medical Society.....	1,556
8. Proportionate number of M. O. R. C., Los Angeles County Medical Society should furnish.....	256
9. Total Medical Reserve Officers, and applicants, furnished by Los Angeles County Medical Society.....	130
10. Quota deficiency for Los Angeles County Medical Society (49.2% of quota).....	126
California is still at the bottom of the list of states in the Ninth Corps Area, in the co-operation her physicians are lending in the formation of the M. O. R. C.	

**Assignments of Medical Reserve Officers**—The war department has just issued instructions that all Medical Reserve officers, now unassigned, be assigned to medical units and duties without delay. In accordance with these orders, the assignment of all unassigned reserve officers of the medical department is now being carried out in the Ninth Corps Area.

In this connection, the surgeon, Ninth Corps Area, has issued a circular, which quotes the instructions received from higher authority, and says:

"The foregoing means that this office must at once make assignments to units of the 369 officers of the Medical Department Reserve (medical, dental, medical administrative, sanitary, and veterinary) now unassigned, and also the quartermasters and chaplains attached to units.

"It is realized that in making, at this time, the assignments now required, it may not always be possible to meet the best interests of vicinity of residence, special professional qualifications, rank, and other local considerations.

"It is proper to say, accordingly, that the assignments which now have to be made should be regarded by commanding officers as subject to future readjustments in the interests of the service.

"They should not interfere with the efforts of commanding officers of units to secure the enrollments of suitable Medical Reserve officers from their local communities, with a view to their assignment to places and special duties in their units which may have previously been filled under the requirements of the above instructions. When such enrollments are made, it is the desire of this office to meet, as far as possible, the wishes of local commanding officers in respect to transfers of personnel to make vacancies in their units which would permit of assignments to their units of personnel recruited by them.

"In other words, present requirements need not interfere with the general plan to build up units from local personnel, selected and assigned by reason of special qualifications, and harmonious in all respects. To that end, the continuing assistance of commanding officers is greatly desired and appreciated."

The following named Medical Corps Reserve officers are assigned to the Ninth Evacuation Hospital, Sixth Army, and to the positions within the unit as indicated after their respective names:

Major David R. Higbee, 409 Watts Building, San Diego, as Assistant to Chief of Surgical Service.

First Lieutenant Ernest B. Porter, 704 Electric Building, San Diego, as Laboratory Officer.

**Women Physicians' Club** (reported by Edna L. Barney)—On February 4, 1926, the Women Physicians' Club of San Francisco gave a dinner at the Hotel Bellevue in honor of Dr. Josephine Baker. Dr. Baker is one of the most distinguished public health physicians in the United States. She has been a pioneer in child health work in New York, and is at present the head of the Federal Bureau of Child Welfare. It was fitting that Dr. Adelaide Brown, who is one of the foremost public health physicians of the western coast, should introduce Dr. Baker. In her speech Dr. Baker emphasized the value of preventive work, especially in the care of babies, and also called attention to the fact that during the same period of life nearly as many women died in childbirth as from tuberculosis in America.

Following Dr. Baker, Dr. Grace Kimball of Southern California spoke on the value of co-operation among women physicians. Dr. Mariana Bertola then outlined the health program of the Federated Clubs. They aim to introduce a maternity and children's ward in every county hospital in the state and, incidentally, to improve the general conditions of county hospitals.

The Women Physicians' Club of San Francisco was organized for the express purpose of entertaining distinguished women interested in medical work, and they felt greatly honored that the first visitor should be Dr. Baker, who has achieved so high a position in a field particularly open to the best endeavors of women.

Being a doctor is easy. Just study medicine four years and then study patients twenty years.

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# CALIFORNIA AND WESTERN MEDICINE

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## MORE ABOUT HOW TO MAKE A DOCTOR

*A Remarkable and Unique Symposium on Medical Education, by a Galaxy of Medical Leaders*

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Discussed by: T. C. McCleave, Hugh Berkley, H. J. Ullman, Myrl Morris, Edward J. Lamb,  
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# CALIFORNIA AND WESTERN MEDICINE

VOLUME XXIV

APRIL, 1926

No. 4

## A UNIQUE AND PROMISING EXPERIMENT IN MEDICAL EDUCATION

### INTRODUCTORY NOTE

As Mark Twain said about the weather, we are indulging in a lot of talking about medical education, but nobody is doing much about it. At least we weren't doing anything about an effective substitution for the admittedly useful apprenticeship training of other days until William J. Kerr, Associate Professor and Acting Head of the Department of Medicine of the University of California Medical School, risked the practical experiment here to be discussed.

The first step in this experiment, by which prominent alumni of the medical school, themselves in active practice, spent a week in turn with the students in the school and hospital in lectures, seminars and bedside teaching, has been favorably reviewed in California and Western Medicine.

The second step, tried in the spring of 1925 for the first time, is a frank experiment in restoring the preceptor method of teaching in an elective course. Four senior students were elected to serve as apprentices, for one month, to general practitioners in small towns. A brief foreword by Kerr and extracts from reports of these students follow.

But first this editor wishes to go on record in enthusiastic endorsement of the idea, with a reiteration of the hope many times previously expressed that the policy will be promoted and carried to its logical conclusion. We have repeatedly urged—the last time in the editorial published in connection with a symposium on How to Make a Doctor, in the November issue of California and Western Medicine—that the most important omission in our present program of medical education is the absence from it of an effective replacement of the one-time preceptor influence. This we have maintained, and still maintain can be accomplished by “accrediting” for intern instruction good small hospitals of from twenty-five to seventy-five beds, located in less congested communities and staffed by the better physicians of these communities. Kerr has carried this idea out with the student who went to Woodland Clinic, and he has taken another fine step in frankly assigning students as apprentices to “family doctors.”

The results are of the happiest, as shown in the informative and extraordinarily illuminating reports of the students themselves. One of the students makes the commendable suggestion that the preceptor service would be even more valuable if taken as a part of the intern year. This undoubtedly is a fact, but this type of fifth-year instruction is not yet upon an accredited basis, as it should be, and therefore it may not be offered to interns as service for which they may have credit.

We here make an appeal to our Council on Medical Education and Hospitals to again carefully review this question.—Editor.

### FOREWORD

By WILLIAM J. KERR, M. D.

*Head, Department of Medicine, University of California*

**D**URING 1923 and 1924 the Medical Department of the University of California Medical School has had the co-operation of some of the prominent alumni in the preparation of students for practice. These alumni have, severally, spent a week at the school carrying on, by seminar, lecture and personal contact, instruction in the art and practice of medicine. The experiment has proved of great value to students, interns and faculty alike, and the alumni have expressed themselves as well repaid for the time spent at the school.

*This year (1925) a further experiment was tried during the second half or the elective period of the fourth year. Three selected students were apprenticed to alumni in general practice in communities of varying size and assigned for a month each. Another student spent a month in a group clinic in a small town where there is close co-operation on all cases. The following reports from these students give some idea of the value of such contacts for the undergraduate. The students and alumni have expressed themselves favorably on this method of instruction. Some faculty members have felt that outside assistance was not required to prepare students for practice. The answer to this criticism is that, almost without exception, medical educators are specialists with little or no experience in general practice. Furthermore, hospital and clinic experience is different in many respects from country practice.*

Such a limited return to the preceptor method of instruction should stimulate an interest in country



practice where doctors are needed and where the young doctor may lay a firm foundation for his life's work. The familiarity with the problems of practice derived from this contact will give the graduate the courage to go out and put into use the things he has learned in the classroom, clinic, and ward.

#### ABSTRACTS FROM THE REPORTS OF SENIOR STUDENTS UPON THEIR APPRENTICESHIPS

A. G. BARTLETT, *who spent a month as apprentice to Doctor John N. Chain of Eureka, California (a town of some 4000 inhabitants), writes of his services:*

"As soon as I arrived in the city and became acquainted with Dr. Chain all my fears were dispelled. I was received very graciously by all those with whom I came in contact, and they all entered very heartily into the idea that we were trying to carry out. In addition to Dr. Chain, Doctors Carl Wallace, Quinn, and Marshall permitted me to see them at their work and helped me in many ways.

"I will give you a little idea of our daily routine. We generally began work at 9 o'clock in the morning. We would go down to the office at this time and attend to the mail and outline the routine daily work. Then the morning calls would begin. These were calls on patients in their homes, and in one of the four hospitals of the city. By the time the calls were made it would generally be lunchtime. At 1 o'clock office hours began, and the routine work was done until about 4 o'clock. Then the afternoon calls would be made, and these were generally finished by about 5 or 6 o'clock. Four nights a week office hours were held from 7 to 8. We very seldom got away before 9, because something would always delay us. Then night calls were made when urgent. One can see that a general practitioner is a busy man. Not only were professional duties attended to, but also municipal duties along public health lines. There were also the noon luncheon clubs to attend and committee meetings of all kinds.

"Dr. Chain, being health officer of the city of Eureka, necessitated calls on smallpox, and other patients with 'reportable' diseases. I also saw the inner workings of a city health laboratory. Every day the city water was tested for colon bacillus, and once a month the milk supply was given a bacteria count. The routine diphtheria cultures were run through every day, and many other examinations of specimens of all kinds made.

"I also saw the indifference of the average doctor to public health matters. Some even resent interference with their work, even in the enforcement of quarantine.

"The Tuberculosis School was another source of interest and profit to me. In this school they teach the persons who are infected how to live and how to prevent the spread of the disease, as well as help them on the road to recovery. Contacts are taken in and taught the food to eat, the precautions to take, and the routine life they must live in order that the disease will not take a firm root in their bodies.

"To do effective public health work in the small town is not conducive to popularity. The quarantine of a debated case may gain the enmity of the doctor and the family. The killing of a pet poodle with rabies may incur the enmity of a certain faction in the community. The destruction of a herd of tuberculous cattle brings a decided reaction from the farmers. The life of the public health doctor is a bitter struggle, where enemies are made and very little praise received. One must have the courage of his convictions and have the good of his profession and the welfare of the community at heart.

"Doctors in the country tell me that the old doctor is passing. No longer do they kill the yellow-legged chicken when he makes a visit in the country. The automobile has changed all this. Now the people come to the city. Rarely do they confine a woman in her home now. The country doctor is making blood counts and utilizing x-rays in making his diagnosis.

*"Despite all this, these small-town doctors possess that wonderful something that one acquires in mastering the art of medicine. They do not have patients who are seen in the ward or office and then forgotten. All of their patients are their friends. The doctor is vitally interested in them and they have absolute confidence in him. It is an inspiration to see the faith that these people have. They are a simple people, and demand simplicity in return. All the doctors possess that spark of sympathy that kindles in every person a feeling of faith and hope. One realizes that ours is a noble profession and demands high ideals. You are the priest as well as the doctor, and in many of the cases a bit of kind advice goes much further than tons of G. C. pills.*

"The picture must not be painted too brilliantly. Unfortunately, one must live. One must have money. There are men in the profession who so devotedly worship at this shrine that they lose their higher ideals. This is often the cause of bitter jealousies and of unprofessional practices. The cream of the jest is that this is merely Life. In the lecture hall and classroom we do not realize that outside of the college there is a bitter fight for the preservation of life and the pursuit of happiness. It will call forth the best that is in us and, if one is a fighter, he will fight until the last barrier has been taken. There is great joy in the victory won in a clean fight.

"An old druggist in the town said that after years of experience in this country and in Europe with doctors that they have the narrowest minds but the largest hearts of any profession. He is probably correct.

"This will probably seem a little disconnected, but these are a few of the impressions that I have brought away. One thing I do know—it is a hard life, and fraught with dangers. Yet the rewards are great and the cause worthy of the struggle."

Mr. Bartlett here lists the diagnoses of patients with whom he had experience during his month's apprenticeship. There were from one to forty patients of each class:

Angina pectoris; tuberculosis; smallpox vaccinations; laryngitis; gonorrhea; arthritis; neuritis; cancer of stom-

ach; ulcer of stomach; tonsillitis; tubercular pleurisy; influenza; acute nephritis; malaria; diabetes; thrombophlebitis; "worm fever"—oxyuris; rheumatic heart; chorea; lymphangitis; glandular dystrophy; gall-stone colic; hypertension; chickenpox; cancer of lip; pneumococcic meningitis; undiagnosed fever; diphtheria; sarcoma of submaxillary gland; measles; septacemia; psychosis; appendix; post-operative hernia; fractured clavicle; boils; cuts; infected fingers; gunshot wound; fracture of tibia and fibula; gall-bladder operation; removal of sarcoma; contused wound of calf; hydrocele operation; C. O. snow treatment; tonsils; hernia; Palmar abscess; posterior gastro-enterostomy; drowned person; cut lip and two teeth driven into jaw; tuberculosis of elbow-joint; dislocated shoulder; dislocated finger; circumcision; normal delivery; low forceps; Caesarean section; curettage; abscess of Bartholin's gland; undernourished babies; convulsion cause by acidosis; well babies; one course of anti-rabic serum; and much clinical laboratory work.

He then continues:

"One can see that the cases seen were very varied and from the therapeutic standpoint very interesting. Calomel is still the standby, and works wonders. The main thing in all the cases was to do something. It did not seem to amount to much what you did, as long as you did something. One relieved the patient and made him comfortable, and then tried to make a diagnosis. They all seemed to demand some sort of medicine, and were highly insulted if you did not give them some. The only fault with this system is the danger of running to extremes of treating everything symptomatically and falling short in making diagnosis.

"I had a very interesting morning with Mr. Bohmanson, who is the proprietor of the largest and best drug-store in the city. He comes from the old school of druggists, with a very wide knowledge of other things than drugs, and he is a very good botanist. He also told me of the various mistakes that doctors make in prescribing. He states that, despite all our scientific training, the average doctor of the new school is a very poor prescriber. They do not have a fundamental knowledge of the drugs, and merely copy some prescription that they have managed to get in some fashion.

"I found that the doctors of Eureka were very conservative in regard to the newer drugs and preparations. They stick to their old standbys. They use serums and vaccines with intelligence. One doctor told me that he knew what his old medicines would do, and he was not ready to use the new things until he was absolutely certain that they would work. The 'shotgun prescription' is still much in evidence, but it generally gets results.

"Much of the valuable experience that I derived from this unique service cannot be told, as it is only within myself. There is a certain confidence that comes and a certain ability to act quickly and to think quickly and simply. It teaches one to think of the simple things first and then, if necessary, refer back to the more remote possibilities. The main thing is to do something quickly and to keep your head. One should tell as much of the truth to his patients as is logical, and always say frankly that you do not know if something stumps you. These are a few ideas gleaned from all the doctors with whom I came in contact."

R. G. FREY, *after serving a month's apprenticeship at the Woodland Clinic (a small California town of some 2500 inhabitants), writes:*

"I feel that the most valuable thing to me was seeing how the patients were handled and what father and mother were told when one of their little ones needed a certain type of treatment.

"I had heard a lot about group clinics, and the one at Woodland very nearly approaches the ideal. It was really good to see how they all worked together and helped each other. Every case gave to each one something of value. When one is practicing alone he naturally learns some things, but he also is apt to get into a rut, not only with his thinking, but in the way he does things. At the clinic, due to the combined aggressiveness and fine spirit, there is no chance to get into a rut. The clinic has an excellent library and with staff meetings where current literature is discussed, each member covering a certain field, the men are kept in close touch with the doings of the medical world. The men in the clinic are first, honest, and secondly, well trained, and so just knowing them many times overpaid me for all my time and effort.

"I have had for a long time the desire to practice in the country. The month in Woodland makes me more determined and certain that, after graduation, I shall practice in the country.

"Every morning at the sanitarium I made rounds with Dr. Harbinson and sometimes with the surgical staff. At noon I would go out to the County Hospital where there are generally thirty or so patients, mostly old people with chronic diseases. Dr. Lawhead, a member of the clinic, is also county physician, and he gave me a very free hand with the patients there and I was able to do many very interesting things. In the afternoon I took histories and made physical examinations of patients in the hospital or on those who came in for office visits. Also during baby clinic days I would get to do some pediatrics.

"The doctors, when they were making outside calls at night, and sometimes in the daytime or when going for consultation work, took me along, and this experience and training was certainly valuable. I got to see early diphtherias and sudden acute things as kidney and gall-stones, appendicitis, etc.

"It might be interesting to mention some of the cases I saw, several of whom I treated and handled myself. The most interesting ones follow: Purpura hemorrhagica, aplastic anemia, lymphoid leukemia, Vincent's angina (which developed in a man who was getting salvarsan injections), cancer of the transverse colon in a young woman, gangrene of the lung, a typical Hodgkin's disease in the abdomen of a child of 9 years, mastoid in a woman of 65 years, gout, several fractures and burns, HCN gas poisoning, bronchiectasis. I also saw some cases of infant-feeding, rickets, various types of rashes, and many of the more common things as pneumonia, hernias, diabetes, cancers, hypertension, decompensated hearts, etc. Around Woodland many people have hay-fever, and I was permitted to test out and help in treating them.

"It was indeed a busy and pleasant month, and I



shall always look back on it as one of the bright spots in my medical training.

"There is a great field in the small country town. Also the visit, although very short, had a marked stimulating effect. It helped me to mold certain ideas, to direct my attention to certain worthwhile things which now have become very interesting to me. I hope that the men of future classes will have the same opportunity."

A. CRAWFORD BOST, *after a month's apprenticeship with Doctor J. W. Seawell of Healdsburg, California (a small town of some 3500 inhabitants), writes:*

"I feel the utter impossibility of indicating to others the great value that is mine for having had the delightful experience.

"I left San Francisco, looking forward to the spending of a most profitable month, and yet it was not without some timidity that I entered the offices of Dr. J. W. Seawell of Healdsburg. Told by the office nurse to be seated for a few minutes, as the doctor was developing some x-ray plates, I was given an opportunity to recover my composure and at the same time to scrutinize the waiting-room. Here were comfortable chairs, neatly hung pictures, and the customary table with, I supposed, the last year's Atlantic Monthly, Saturday Evening Post, and the Police Gazette, which we as students are warned against. I approach the table and, much to my surprise, find only the current numbers of a few well-chosen periodicals. This indeed is strange and yet alluring. I begin to wonder about this so-called country practitioner, but not for long, as the door to the inner office is opened by a kindly man who proffers a greeting most warm, and at once I am sure that my month is to be most profitable.

"The first lesson, although not previously planned, proved to be perhaps the most valuable one during the month. A young dentist, with office nearby, came into the office with one of his patients and a member of her family to ask Dr. Seawell's opinion concerning the proper method of treating an aching tooth. The fact developed that the patient had absolutely no confidence in the ability of the dentist to handle the case, and was unwilling to undergo the proposed treatment without first consulting Dr. Seawell, who she knew did not have the knowledge of dentistry of the other man, but in whom she had the utmost confidence and faith. This lesson brought out the fact, which was daily demonstrated, that a great part of the success of the man in practice lies in having the absolute confidence of the patient. A more timely demonstration for the benefit of a student is difficult to imagine, and its moral will never be forgotten.

"Hours 11-12 and 1:30-4—The legend portrayed by the neat black letters on the outer door gives no idea, unless a sadly mistaken one, of the time spent in carrying out the duties of a busy and successful general practitioner. During the above-mentioned hours the office is crowded with patients, who in turn pass into the inner sanctum, where each is given the full time necessary to fully understand his or her complaints and to properly care for them. Fully written records must be made and

filed away for future reference. The day starts at 8:30, or earlier if necessary, and the morning hours are taken up making calls about the country, at the hospital, and in town, in addition to the surgery that is done. After office hours in the afternoon, more calls are made and many times one must spend part of the evening completing that work for which the day held no time. At night one must always be within calling distance to answer those emergencies which may arise. For the ordinary man this might round out the work, but if one is to keep up with the recent advances and be considered competent in the eyes of his fellow-practitioners and patients, he must, and to assure himself that he is doing everything for the patient that could be done, he will, religiously, carry out each day some plan of study in addition to his other work. Odd as it may seem, all is not work, however, for there are those hours of recreation during which pleasant times are had in the company of a few well-chosen friends. 'A doctor's close friends must be few, and those well chosen, but in addition he is a close friend to all his patients.'

"Aside from one's own practice, there is always a certain amount of consultation work. To give a general idea of this work I can think of no better way than to quote a few of the ideas that Dr. Seawell gave to me. He said: 'Never be afraid to call a consultant if you are in doubt. Such a move will never cause your patient to think less of you. If you feel that your patient's confidence in you is slipping, suggest to him that he might call a consultant. When called in consultation, be honest with the patient and the patient's family, but be honest with the doctor as well. Do not consult with a man unless you feel that he is honest and you think that he feels the same toward you.' It was my good fortune while in Healdsburg to be present during several consultations and to see the proper way of conducting such procedures. It was also my good fortune to be present at one consultation which, while not conducted properly from all angles, served most forcibly to bear out the above statements and taught me in a manner I am sure I shall never forget that honesty, backed by knowledge on the part of the doctor, will always assure success.

"Hospital facilities, ever a problem in the small community, are taken care of in Healdsburg by an eleven-bed general hospital. The delicate situation of ownership by one doctor, and therefore failure of support by others, is eradicated, as the hospital is owned and operated by other interests. Here is a well-equipped operating-room and nicely furnished rooms. The problems of professional jealousy I found not to be linked with the type of practitioners with whom we were associated, and judge that such problems are not to be found hand-in-hand with the successful practice of medicine.

"In addition to the ordinary office equipment, electric diagnostic instruments, a very well-equipped x-ray and fluoroscope are a part of Dr. Seawell's apparatus. These are used as adjunct measures, rather than routinely. Asking concerning the use of the x-ray for deep therapy, etc., I was told 'that a little knowledge was a dangerous thing,' although but the day before I had seen the entire plant taken

apart and reassembled without a fault, in order that I might see the 'inner workings.'

"From the above statement it may be gleaned that the man in the general practice of medicine relies upon his eyes and his hands rather than upon instruments, except where they are really needed, for the diagnosis of his cases. In the home the necessity for using one's eyes and hands is shown most clearly. The light is not always of the best, there is no handy 'chariot' from which to procure tongue blades, and it is impossible to resort to instrumental methods such as we are trained to use in the hospital, so that we realize the insistence of our teachers in the hospital wards to use our eyes and our hands (as well as our heads) in the examination of patients. I learned that spoon-handles make satisfactory tongue depressors, that a few well-chosen drugs conveniently carried do just as well as elaborate prescriptions, and many other practical things that can be easily carried out in the home. More than this, however, I learned that if one is honest, kindly to all, tolerant and patient, there is, with his entrance into a home, a sense of relief, which, after all, in many cases is more than 50 per cent of the cure.

"I have seen a doctor enter the home of frightened parents of a sick child at midnight. I have seen him take the temperature, feel the pulse, drop a few cheery words and, without doing another thing, leave the household in perfect confidence that everything was and would continue to be all right. I think I began to understand something of the 'art of medicine' on such occasions, but I know I understood that behind this confidence was the implicit faith in the honesty and straightforwardness of the doctor. In addition to these attributes, or rather to possess them, one must have a knowledge of medicine of such a degree that confidence in one's self is inspired."

T. L. ALTHAUSON, *after a month's apprenticeship with Doctor John N. Chain of Eureka, California (see Bartlett's report), and after describing experiences similar to those already given, writes:*

"Besides seeing many cases and methods of treatment, I learned a great deal about the human side of the practice of medicine. By the human side I mean the ability to encourage a patient who has a slow recovery before him, the knowledge of what to say when a diagnosis cannot be established at the first visit so as not to lose the confidence of the family, or tact in giving to the relatives a practically hopeless prognosis without shocking them. Of course, there are no stereotyped formulas for these and many other delicate situations with which a physician has to cope and, even if there were such formulas, three weeks would not be nearly sufficient time to learn them. But these three weeks under the guidance of Dr. Chain have given me the realization that every patient and every family is a problem of its own, and that the most important thing in the relations between doctor and patient is the sympathetic attitude of the former to the latter. If this spirit of sympathy prevails it will not be very difficult for the doctor to do or to say the right thing, provided he has a reasonable knowl-

edge of human nature that gradually develops with years of experience.

"In still another way have I profited by this experience. There is something lacking in the life of a medical student; perhaps it is lack of time or the fact that in teaching hospitals the patients are cared for by the staff, and the student does not have the personal contact with them which would be most valuable for him. Contact with Dr. Chain and his humanitarian point of view, which makes him see the situation through the patient's eyes, has helped me to see this fault in myself.

"In my opinion, this elective course in Practical Therapeutics and the Art of Medicine is a unique opportunity for the medical student, and I would not have missed it for a great deal. It also seems to me that what has been done this year at the University of California Medical School should be communicated by some appropriate channel to other medical schools.

"In conclusion, I want to say that I think the value of an elective course such as this would be still enhanced if it were offered after completion of the intern year. There are several arguments in favor of this. In the first place, the young doctor would be in a position to get more out of it than the senior student. In the second place, more time could be devoted to the course, say from six weeks to three months, depending on mutual agreement, and, last but not least, the physician in charge would be able to delegate the young doctor to do a part of his routine practice and thus receive something in return for the time and effort required for teaching."

#### DISCUSSION

Ray Lyman Wilbur (President Stanford University)—I am enclosing some comments and also the record of Dr. Kerr's education experiment. I have gone over it with unusual interest. A man has to learn to practice alone to be a good practitioner. I can illustrate it in this way. If one has always hunted with a pack of dogs and a number of friends, it is a very difficult thing for him to stalk game by himself successfully. The general practitioner has always the problem of relying upon himself to get results. The student trained in the medical classes or in the hospital never quite feels the full responsibility that must be his if he is to succeed in practice. There is often more education in one patient handled with a full sense of responsibility than in a dozen handled in part, but where the responsibility for them rests on someone else. It is an inspiration for any medical student to come in actual contact with the ordinary life of the practicing physician. I am very much pleased with Dr. Kerr's experiment and with the results. I think it offers a method of revival of some of the most useful elements in the apprenticeship system. While it may be troublesome, it seems to me that it has advantages, both for the practitioner and for the student. Any wide-awake well-trained medical student can contribute a great deal by spending a month with a man practicing in the country. He is not entirely on the receiving end. The doctor gets considerable assistance.

I hope you will be able to encourage Dr. Kerr to go right ahead.

Wallace I. Terry (Professor of Surgery, University of California Medical School, San Francisco)—In discussing Dr. Kerr's well-timed experiment in medical teaching, I shall briefly recount my own experience during my student days. It was my privilege to spend two vacation periods, of some three months each, in the Sacramento County Hospital, then under the charge of Dr. George A. White. He was a man of indomitable energy, resourceful and progressive. While ordinarily taciturn, he would



become communicative during many long rides we made to see patients in the country districts. Often he would quiz me on medical subjects, supplementing my scant knowledge with the results of his extensive experience in all fields of medicine. I saw a wide range of clinical material and learned many things of practical importance by immediate contact with the patients.

Today the opportunities for such practical experience are many times greater than in my day, and I heartily commend Dr. Kerr's scheme to utilize them so far as possible. It is not necessary to remodel our educational program, but simply to supplement it.

Percy T. Magan (Dean College of Medical Evangelists, Los Angeles and Loma Linda)—I have been deeply edified and greatly cheered by the reading of Doctor Kerr's courageous "experiment" in restoring the old-time "preceptor method" in medical education. Moral courage is ever a higher type of that wonderful quality than physical courage, and any attempt to blaze new trails in these days of excessive standardization calls for certain phases of moral mettle, of which none too many men are possessed.

It is almost impossible in the present hour for a student to graduate from any high-class medical school without possessing an excellent scientific equipment. Nevertheless many physicians trained during recent years have made dismal failures in their profession. The trouble is they have the *science*, but they lack the *spirit*. Too many of them are devoid of what has been tritely styled "The art of people." They do not appreciate what it means to deal with men and women—they lack ambceptor. They are an *atmosphere* rather than an *influence* in their community. They possess not that wonderful something which the Master of Men so beautifully visualized for a ruler of the Jews when he said "The wind bloweth where it listeth, and thou hearest the sound thereof, but canst not tell whence it cometh, and whither it goeth; so is everyone that is born of the Spirit."

When Bartlett learned that the doctor is priest as well as physician he grasped a great truth. When he acquired the point of view of Bohmanson, the druggist, "that, despite all our scientific training, the average doctor of the new school is a very poor prescriber" he got a glimpse of a real fact. There is great danger that the modern medical student will become impregnated with the belief that he cannot learn anything except from the very learned. As a matter of fact, it is those in the humble and simple walks of society who oftentimes can impart to us in their homely way the greatest lessons of life.

Strange as it may seem to those who have not pondered upon it, some of the greatest achievements in this earth's history have been brought about by men working practically single-handed. The modern medical school lacks in inculcating the self-reliance so necessary to make a success of practice single-handed in a small town or a rural community.

Verily the preceptor method will do much to bring into the lives of the young doctors of the day those blessed talents which Doctor Garrison perceived in the life of Sir William Osler:

"What made him, in a very real sense, the ideal physician, the essential humanist of modern medicine, was his wonderful genius for friendship toward all and sundry; and, consequent upon this trait, his large, cosmopolitan spirit, his power of composing disputes and differences, of making peace upon the high places of bringing about 'unity, peace and concord' among his colleagues. 'Wherever Osler went,' says one of his best pupils, 'the charm of his personality brought men together; for the good in all men he saw, and as friends of Osler, all men met in peace.' (From the Foreword in "A Physician's Anthology of English and American Poetry," Oxford University Press, 1920. Selected and arranged by Casey A. Wood and Fielding H. Harrison.)"

After all, how useless are brains without the technique of the spirit.

John N. Chain, M. D. (Eureka, California)—I am returning the abstracts of Dr. Kerr's report on his experiment. It will make a very interesting article when published. I have been too much connected with the work to really feel that I would be competent to make

any further comments than that I am very much interested and very much in favor of a continuation of the work as outlined, and I certainly appreciate the opportunity to have been allowed the privilege of taking part in it.

J. Walter Seawell, M. D. (Healdsburg, California)—I have considered it a great privilege to take part in this experiment, and sincerely hope that some good will come from the effort.

I think the effect on the student could be better judged by those connected with the medical school on his return from his month's study with the preceptor. I feel that the preceptor will also gain as well as the student. There is no doubt but what the student acts as a stimulus so that he, the preceptor, makes an effort to do better medicine and keep abreast of the times, in reference to late developments in medical science. I myself could ask for nothing better than to have a daily contact with one of these young men for a month every year.

Fred R. Fairchild, M. D. (Woodland Clinic)—Dr. Kerr is not experimenting. The scheme is not new. He is simply reviving a method of instruction that in the past was responsible for the production of that wonderful type of family physician, so much admired and so nearly extinct today.

The system of co-operation in instruction by experienced alumni has, in the past two years, definitely proved its value. These men bring something of the practical atmosphere of the student's future work to him. From personal experience, I am sure that this same contact is of immense value to the instructor.

Of far more importance is the second step in Dr. Kerr's plan. This has been less thoroughly tried, but it would seem to be the beginning of the solution of a very vital problem in the practice of medicine. It is accepted that our young men and women are graduated with a high degree of technical knowledge. It is almost as generally recognized that they are graduated with a minimum appreciation of the true art of the physician.

Scientific training is not a substitute for a lack of sympathy and understanding. An ability to view disease from the patient's standpoint is the fundamental principle upon which the art of the practice of medicine is based. A high degree of specialization tends toward commercialism and a cold-blooded, scientific approach. A disease is viewed as an interesting scientific problem, not as a disaster that has overtaken a human being.

The plan by which the student is given an intimate association with a man in general practice who knows his patient and understands his economic problems, as well as his physical ills, will give to him a new conception of the true physician. And only by such association can the student come to have any idea of the value of this intimate relation.

The student will approach such an experience with enthusiasm and with not a little egoism. He will feel that he is better trained—and usually he is—scientifically, than the man to whom he goes. He will confidently match his theoretical, scientific knowledge against the years of experience and the practical horse-sense of his preceptor, and he will return to his duties at college a wiser and a humbler lad.

Dr. Kerr should have our unqualified support. This little beginning, carried to its logical conclusions, bids fair to restore to our profession something of the wonderful spirit which the laboratory has crowded out.

J. Wilson Shiels, M. D. (490 Post Street, San Francisco)—Doctor Kerr's plan and desire are highly praiseworthy, and should be given a pliant ear by all professional men striving to maintain and reinforce the efficiency of those who have elected to bring health and resistance to humanity.

I have been advised that when a Cardinal is to be elected Pope, it falls to the unhappy lot of another to assume the role of "The Devils' Advocate," and in this position to bring forward all the improbable but possible obliquities of the candidate. Utilizing this fact as a theme for my comment on the Kerr experiment, let me, for the nonce, combine the celestial and infernal advocacies.

The success of Kerr's plan depends absolutely upon the most careful selection of the preceptor, and this selec-

tion should not be governed by any wealth other than a wealth of sincerity, and knowledge of Doctor Kerr's ideals, and strict obedience to them on the part of the preceptor, as well as the student selected; for it would be a tragedy to besmirch the student possessed of the ethics and training of an established and honored university by an association with the physician or surgeon whose position and affluence were the outcome of perfidious methods of pseudo-humanitarianism. But, after all, we can be assured by the selection up to date, that Dr. Kerr has meticulously considered this possible danger.

Again, before the departure of the student, it should be impressed upon him that he is on his way to be educated in the art particularly, and very much less so in the financial remuneration of the art, and that he must accept the finer principles of the art only when they correlate with his own rules of honorable conduct.

And if the student be deeply dyed with the fascinating and frequently unreliable teachings and theories of modern medicine, as justly taught in a school of medical learning, not so much for their worth as for his mental training, and for his future personal analysis of value, he must not permit himself, consciously or unconsciously, to deprecate the values of the art of medicine by condescension on his part. By so doing, Doctor Kerr's plan would be defeated.

Again, the preceptor must not see in the presence of the student a possible unqualified assistant, for here lies a great danger.

Reading over President Wilbur's comment, I find myself at one with him where he states that a man has to learn to practice alone to be a good practitioner, and his simile of hunting with a pack of dogs and a number of friends is well taken, but hunting with dogs and friends allows the individual, does it not, to become familiar with the terrain of hunting? Still, he is right, for the older world students, in their outdoor dispensary work in large cities, are very much alone and upon their own responsibility, and gain the art of medicine by their own experience, although at all times they have the support of the chief of the dispensary, a qualified man of years and experience.

As a matter of fact, we can read into the Doctor Kerr plan an effort to create, in a sparsely populated state, the outdoor dispensary system, the preceptor being the general practitioner selected.

The very great advantage of the plan comes to the student in his prescription-writing and his surprised acknowledgment of the remedial value of old-fashioned methods. For it cannot be denied that the trend of education is to utilize physiology and pathology for a diagnosis, rather than for an indication for treatment.

It would seem to me that a well-equipped general practitioner should be assigned to the teaching staff of the university, and should receive a proper titular position and a chair, subsidiary if you like, on the art of medicine; for, by so doing, Doctor Kerr's plan would be enhanced, as the student would leave for his month's association with the preceptor equipped to appreciate the art as demonstrated by him.

This is, in a measure, gained by the various physicians who are requested to spend a week at the University of California Hospital, part of Doctor Kerr's plan, but not altogether to my way of thinking.

A science teaches us to know; an art teaches to do; and the doing of a doctor is to cure. Doctor Kerr's most praiseworthy and interesting experiment will, I am confident, inculcate in the self-reliant and the diffident student alike a courage to cure, the possession of which brings the confidence of the patient, which, after all, is the foundation of any medical man's efficiency.

**The fifth annual meeting of Pacific Northwest Medical Association** will be held at Spokane, in the Marie Antoinette room of the Davenport Hotel, July 1-3.

Included in the list of prominent speakers are:

Dr. Howard C. Naffziger, San Francisco, who will give two lectures on neurologic surgery.

Dr. George Dock, Pasadena, formerly of Washington University and University of Michigan, will be the principal speaker on internal medicine. As one of his subjects he has chosen a discourse on the anemias.—*Northwest Medicine*, February, 1926.

## SURGICAL JUDGMENT

By FRED R. FAIRCHILD \*

*The Editorial Councilor who evaluated Doctor Fairchild's essay for the editor says: "Publish by all means. It is a frank and vigorous discussion of a subject that should have more consideration than it receives."*

*Doctor Charles D. Lockwood, one of the discussants, says: "Doctor Fairchild in his straightforward and forceful paper has, to my mind, pointed out some of the greatest evils in surgical practice today."*

*Doctor Edgar L. Gilcreest, another discussant, says: "Doctor Fairchild has pointed out the evil which we all recognize, and he has offered an attempt to help correct it. I heartily endorse all he has said."*

*Doctor Charles M. Fox, in discussing this paper, says: "While Doctor Fairchild's paper should be of interest to all men doing surgery, it is, I believe, of unusual value to the younger surgeons. Too often the man with incomplete surgical training believes that surgery is a matter of technic. A step ahead of him is the man who uses the laboratory freely and forms his conclusions almost entirely from these findings."*

*Doctor James F. Percy, another discussant, says: "This is a discerning and an appealing paper, filled with practical common sense, beautifully expressed. If the meat that is in it could be made into a serum and introduced into the blood of every human doing surgery the world over so as to make us incapable of being responsible for the things Dr. Fairchild has warned against, we could at once blot out the oath of Hippocrates. We certainly would have no further use for that otherwise always much-needed document."*

*Discussions in full follow the article.—EDITOR.*

**S**URGICAL judgment is the most vital single factor in the practice of surgery—the judgment on which treatment is based. No degree of technical skill can compensate for an error in judgment. Including all surgeons, ten will be found competent to execute a surgical procedure to one who is as competent to pass wisely upon the method of choice.

I do not doubt that this statement will be accepted as representing the truth, or even less than the truth.

Doctors of judgment, plus technical skill, are surgeons. Those with technical ability, minus judgment, are operators. Between the two classes there is a wide gulf. The surgeon does not focus his attention on the lesion to the exclusion of other modifying conditions. His advice is given with an eye singly to the welfare of the whole patient. The operator, intent upon what he feels to be an obvious pathological entity, does not see—may not even search for—other abnormalities which, being noted and understood, would altogether alter the original plan of treatment. Too often, I am afraid, his advice is tinged with selfishness.

"The operation was successful, but the patient died." We smile at this remark or are annoyed by it, according to our temperaments. But have we analyzed its meaning? It isn't a joke; it is a rebuke. It isn't a slur; it is the truth. It applies to operators often; it applies to surgeons occasionally. Thoughtfully considered, what does it mean? Sometimes, I fear, simply that there has been an error in judgment and that the penalty has been death.

\*Fred R. Fairchild (Woodland Clinic, Woodland, California). M. D. Cooper Medical College. Practice limited to Surgery. Hospital connections: Chief Surgeon Woodland Clinic. Appointments: Chief of Surgical Staff, Letterman General Hospital, 1918. F. A. C. S.



This statement is, of course, a general one. We recognize human limitations. We know that surgical patients are and will be lost, in spite of all that science and skill can contribute. But there is not one of us who, reviewing his work, cannot recall patients he has lost but which might have been saved had his judgment been better. The sad part of it is—and the justification for this paper lies in the fact that we must sometimes admit—that the error came from our failure to get or to consider all essential obtainable data. This statement is not made thoughtlessly; if it were it would be offensive. It would be a slander directed at a great and noble profession. It is the truth. We could note many extenuating circumstances. But this is not written with the purpose of finding alibis for those of us who are in any measure delinquent. It is written in the hope that, honestly recognizing our shortcomings, the suggestions and discussions following may stimulate us into activity, making us more worthy of the great trust imposed upon every surgeon.

What, then, is the basis of surgical judgment? We hear it spoken of as a special faculty enjoyed in large measure by a few. Is it an inborn ability—a quality which one man may have and of which another may be deprived? It is not. It has its foundation on knowledge. It is developed by earnest thought. It is matured by experience.

No judgment can be sound that is based on chance. No reliable deductions can be drawn, and no trustworthy conclusion can be arrived at until chance is, insofar as possible, eliminated. Until every essential obtainable fact is before us a decision should not be made.

This you say is academic. It is. But let us be quite honest. Do we, except in the definitely obscure case, make such accuracy our invariable method of procedure? Is it not true that most of our errors occur in the consideration of those cases, the nature of which or the advice for which seems obvious? Do we not without sufficient excuse take the existence of certain facts for granted?

The above are generalities and of no value unless practically applied. The application, as I see it, lies in the resolution that we secure for each patient all of the pertinent facts that come under the following four heads, no one of which is new and no one of which can be omitted without danger of serious error:

First. *The Entity*—Each case must be considered as an entity. The diagnosis in two cases may be identical. Correlated conditions may so modify the judgment as to make the advice for treatment of the two entirely dissimilar.

Second. *The History*—The history must be complete. It is more important than the physical examination or the laboratory tests. Properly taken, it affords indispensable information. It must be comprehensive. Early symptoms are often classical. Late symptoms may be clouded by secondary complications. It must be taken in detail. Coincident troubles may render atypical the manifestations of the fundamental disorder—they may alter the advice as to treatment.

Third. *The Physical Examination*—This exami-

nation should never be casual. To demonstrate those physical signs clinching a diagnosis is not enough. The background of the eye; the perforated nasal septum; the abnormal reflex—these or other departures are often leads, which followed, will alter entirely the advice as to procedure, even though they may not change the diagnosis.

Fourth. *The Clinical Laboratory*—The laboratory should be used to a much greater extent than most of us use it. We must not act without the information which it alone can give. We have no right to assume that certain functions are normal and to proceed with our work if life or health is to be in any degree jeopardized should that assumption be incorrect.

It availed the patient little that our diagnosis was right or that the operation was beautifully done if we failed to note a co-existing condition which, aggravated by our skill, caused death. To have done the wrong thing well may be infinitely more regrettable than to have done the right thing poorly.

I have stated that the facts to be obtained under the above four headings, viz: The Entity, The History, The Physical Examination, and The Laboratory, are all necessary. *Let me as positively state that these facts are of great value only when correlated.* Laboratory diagnoses are misleading. They form but parts of the completed picture; they are untrustworthy standing by themselves. They may, and often do, entirely alter the advice as to treatment. As examples: During the past year a classical severe case of gall-stone colic was seen. No laboratory aid was needed in establishing the diagnosis, and the temptation was strong to proceed without waste of time; but the routine disclosed a coincident severe lymphatic leukemia. The complete blood analysis enabled us to make a surgical judgment that saved a patient's life. Another case was referred—a young man with a gluteal abscess resultant on an infection following an intramuscular injection of iron. This was an obviously simple thing, requiring a small amount of anesthetic and an incision. The routine did not seem necessary. It was not followed. Its omission cost the patient's life—he was a diabetic. Other examples could be given. I shall omit them and ask you to supply them from your own memories. If this were an experience meeting, conducted as were the good old-time revivals, we would all be able to testify.

So, if argument were necessary to support the statement that an astonishingly large number of operations are done on erroneous diagnoses, the data to prove it would be easy to find. If the records of the cases—or, still more significant the absence of records—were reviewed, the reasons for the errors would be obvious.

Correctly diagnosed and skillfully operated cases sometimes fail to recover. I am sure that another review of the records made for the purpose of finding the cause for these unhappy results would show that too many of the fatalities came from sins of omission. An unbiased check would not infrequently establish the cause of death as bad surgical judgment, and the absence of fundamental data in history, physical, or laboratory investigations would explain at once why the error was made.

Defective surgical judgment, then, is responsible for operative fatalities. And deficiency in surgical judgment is due in large part to carelessness on the part of the operator. If it be true—and I should be surprised to hear the point debated—that this judgment is based on the deduction from facts, it follows that the man who cannot or will not obtain these facts cannot exercise safe judgment and should not be considered competent as a surgeon. That the facts are not obtained by some who do a large volume of work is, among members of our profession, a matter of common knowledge. But these men are licensed, "even as you and I." They have been passed upon as competent, and presumably at the time of their examinations were as well equipped as the average to practice surgery. But if, by retrogression or indifference or mercenary motives, they have ceased to cherish and safeguard the health and lives of their patients, should there not be some method by which the fact could be established?

The affirmative answer to this question brings me to another point of this paper. The surgeon who lets the laboratory think for him is incapable of thinking for others. Facts so obtained can only help him to think more clearly. The data which I have insisted should be secured is that which every careful, conscientious surgeon recognizes as necessary to insure the greatest degree of safety to the patient. The routine which has been suggested as reasonable to guarantee the securing of vital facts is only given to emphasize the necessity of thoroughness.

The points I have hoped to open for discussion are simple. I have stated that the patient's health and life are as surely compromised by incomplete observation and resulting bad judgment as they are by poor technique; that many unsatisfactory results and fatalities are directly traceable to the former cause; that this condition should be and can be in large degree remedied.

To this end I submit the following suggestions as a working basis, looking toward better things in surgery.

In the first place, it will be necessary to make every operator, not only theoretically, but practically responsible for his results. Under existing conditions this is only theoretically true. We hold our licenses as physicians and surgeons. It is our right to practice medicine or surgery. It is assumed that we will exercise these functions in keeping with the sacred traditions of our calling. But practically we may proceed without any of the fundamental precautions having been exercised. We may do a successful operation and our patient may die. We may have this experience again and again, until the law of averages proves that something is wrong. But who or what is there to check our results or to look for the cause behind them?

One may administer the physical estate of another. Does the court accept the executive's statement that he has done it honestly and well? The court does not. Records are checked to the last dollar. The material estate of the deceased is safeguarded.

How much more important when a life, not an estate, is at stake! But is there a similar check on the competency or honesty of the surgeon? There

is not. Practically, he may do as he pleases with the body of the sufferer, without a line to prove that he has acted wisely or well. The presumption that he is honest and competent is all that is necessary. Unhappily, not all operators are both honest and competent. Some could not qualify on either count.

I submit, then, that the first step in the solution of this problem will be in the formulating of some plan—legislative or otherwise—whereby the responsibility of procedure will be fixed definitely where it belongs, viz., upon the operator. Every individual by law made eligible to operate should by law be required to keep records of his cases. These records he should be compelled to submit, on request, to the inspection of some competent constituted authority for review. This would work no hardship and could entail no embarrassment on the competent surgeon. It would strengthen and protect him. It is obvious what the effect on the incompetent and dishonest would be. His exposure would be inevitable and his ultimate downfall a certainty.

Institutions entirely mercenary and operators devoid of conscience do not trouble with expensive details, serving no purpose except the minor factor of safety to the victim. Institutions and men in this class will not, because they cannot, produce records to uphold them in their work.

The profession and the public have a right to know the truth. The factor of individual responsibility properly applied would be conclusive.

#### DISCUSSION

CHARLES D. LOCKWOOD, M.D. (65 North Madison Avenue, Pasadena)—There is not one of us who cannot recall some surgical case in his experience where a little more care in the preliminary examination, a little more thorough pre-operative preparation—in short, where the exercise of better surgical judgment would have resulted in saving a life.

It seems to me the most important thing is the physical examination. Every surgeon who undertakes major surgery should be competent to make a complete physical examination, and this should be done as a routine, preliminary to every operation. Many surgeons of today, particularly those who practice limited surgical specialties, are not qualified to make a proper physical examination. They limit their examination to the obvious lesion or to that phase of it which lies within their field. They must depend upon the opinion of the physician or the laboratory for an estimate of the patient's resistance and general condition.

*The only sound basis for surgical judgment is a broad fundamental training in general medicine and surgery. Mere technical skill and theoretical knowledge acquired through a brief apprenticeship or, in short, post-graduate courses are inadequate as a background for major surgery.*

EDGAR L. GILCREEST, M.D. (384 Post Street, San Francisco)—When a surgeon realizes his mistakes, acknowledges them frankly and takes all the more precautions to prevent their recurrence he demonstrates that he is possessed of two sterling and cardinal traits—honesty and sincerity. Would that these two qualities were more contagious. Would that Guy de Chauliac's words could be more indelibly impressed upon the conscience of more operators so that in time they might undergo such a metamorphosis that they would become surgeons. De Chauliac said in part: "Let the surgeon be well educated, skillful, ready and courteous. Let him be bold in those things that are safe, fearful in those things that are dangerous, avoiding all evil methods and practices. Let him be tender with the sick and honorable to men of his profession. . . ."

CHARLES M. FOX, M.D. (402 Electric Building, San



Diego, California)—I believe that a man is fortunate to have practiced medicine before laboratory methods had advanced to their present status. The trick, so to speak, is properly to correlate history, clinical findings, and laboratory data. Repeatedly, an intern will order all laboratory work that a glance at the patient suggests before even getting a history. As Fairchild says, a careful history, followed by a careful physical examination, should always be the procedure.

I have for a long time believed that in all medical schools the reading of one of the old works on surgery—Sir Astley Cooper's, for example—should be obligatory. This would help impress upon the student the possibilities of careful observation and examination.

As to a remedy, if there be one, it is largely along lines of education of the medical student, the surgeon, and the layman. There will always be commercialism in surgery, but by education I think it possible that in various communities unscrupulous and inefficient men may be segregated in their own institutions. The first-class hospital will continue long after any one set of attending men have passed on and, in years, a reputation will be made by such an institution which will guarantee the integrity and ability of all men doing work therein.

JAMES F. PERCY, M.D. (1030 South Alvarado Street, Los Angeles)—In our day a paper of this character does two things: First, it distinguishes its author as one who is an idealist, and for this reason what he says should be received with admiration and respect. Secondly, it emphasizes the precept that we should at all times live up to the very best aims of our profession.

But the mentality, attainments, and ethics of surgeons vary. They differ just as these attributes do in those who compose other groups of men and women. Too many of us do our best thinking after the patient is dead. We may even try to excuse ourselves with the misleading thought that the patient died cured. Many among us are too lazy to make the mental effort necessary to work out our surgical problems in the way that is best for the patient and for our profession as a whole.

Consequently, what is the practical use of a paper of this kind except for the two reasons just mentioned? It has no teeth to enforce the idealism which it so gracefully inculcates, and you cannot force surgeons or any other group of men to interest themselves in the problems that will preserve their future in the most efficient and happy way. True, physicians and men are better than they were in my early medical days. The drunken physician is no more. Surgery, on the whole, is much improved, kinder, saner, and more humane than it was even twenty years ago. But is it up to where it should be when we are asked to consider it from the lofty plane announced by the writer of this paper? It is not, especially when we consider that the forces arraigned against us are apparently growing faster and are more menacing every year. The good that we are doing is not sufficient to invalidate the damage to scientific medicine that their condign efforts produce. We are accomplishing little in a concrete way to keep surgery on a decent level in a big way. Anyone who is a graduate can do about anything he wants to without let or hindrance.

The legal profession in this state has gone way ahead of us in standardizing ethical conduct. In Los Angeles the Bar Association is almost ruthless in its employment of disciplinary measures against its recreant members. But we still go into court and defend some members of our guild who by all the common laws of reason and sense we know are either fools or knaves. You can't change such individuals by preaching the glories of the altruistic life to them as Dr. Fairchild so well does in his paper. It is these members of our fraternity who so conduct themselves that they continually stir up inimical influences against us in the body politic. The results of their stupidity frequently reach the state legislature, and when they do, laws are framed that are likely to be harmful not only to us, but to the public as well, and the injury to the progress of scientific medicine we cannot well calculate, but it must be great. It is these errors of our mortal mind that give the cults the ammunition which permits them so effectively to point the finger of scorn at us. As a body of reasonable men and women, why should we await the correction of these grievous errors of ours from outside our own ranks? Frank Bil-

lings said to me a few years ago: "The medical profession in this country is in clover, but it is selling its birth-right, and you can't make the average physician see or understand."

In order to crystallize my conception of what is basic in Fairchild's essay, I will ask permission to introduce the following resolution for the consideration of the members of the Surgical Section of the California Medical Association at the proper time:

"Resolved, That the Surgical Section respectfully ask the Council of the California Medical Association to consider the advisability of petitioning the Legislature of California to pass a law that will standardize the minimum requirements that this association considers necessary before a physician in this state can qualify as a specialist in major surgery."

EDITOR'S NOTE—The resolution of Dr. Percy was unanimously voted down by the Surgical Section.

DOCTOR FAIRCHILD (closing)—The paper was not intended to be idealistic. From the standpoint of the author it is entirely practical, in that it deals with facts which cannot be controverted. The intention was to emphasize the conditions which we all admit to be present, the sole purpose being to stimulate the members of the Surgical Section, California Medical Association, to constructive thought, looking toward some practical solution of the problem.

It is recognized that this paper does not offer this solution, but it is believed that a matter of such vital importance to the patient and to the physician is worthy of very earnest effort on our part in an endeavor to eliminate the elements which we all admit making, with danger to the patient and discredit to ourselves.

It is hoped that earnest consideration may now, or in the not far distant future, result in the formulation of some plan by which the practice of surgery will be placed on a higher plane to the honor of the physician and to the safeguarding of the lives of those who suffer.

## CARCINOMA OF THE KIDNEY

By CARL F. RUSCHE \*

*Contrary to the formerly accepted opinion, carcinoma of the kidney is rare before the fifth decade; the mistaking of mixed tumors for carcinomas is responsible for the large number of these growths formerly reported as occurring in extreme youth.*

THE following recently observed case of kidney tumor seems to possess features of sufficient interest to warrant a detailed report.

The chief points of interest in this case are:

1. The difficulty in diagnosis presented by the absence of haematuria and the vagueness of other symptoms immediately referable to kidney.
2. The value of ureteral catheterization and pyelography in the diagnosis of kidney tumor.
3. The unusual size of the palpable mass and the difficulty of ruling out intra-abdominal tumor.
4. The absence of any discoverable metastasis and the excellent general condition of patient nine months after operation.

### CASE REPORT

*History*—J. S. (No. 7678), a laborer, married, aged 69, was first seen at the hospital, January 22, 1923. There was nothing of importance in his history up to four months before admission, at which time he complained of constipation, and a feeling of discomfort in the epigastric region, with a considerable accumulation of gas. The later symptom seemed to bear no relation to time or kind of food eaten. Belching and cathartics gave some relief.

\* Carl F. Rusche (6422 Hollywood Boulevard, Hollywood). M. D. University of Nebraska. Practice limited to Urology. Hospital connections: Hollywood Hospital.

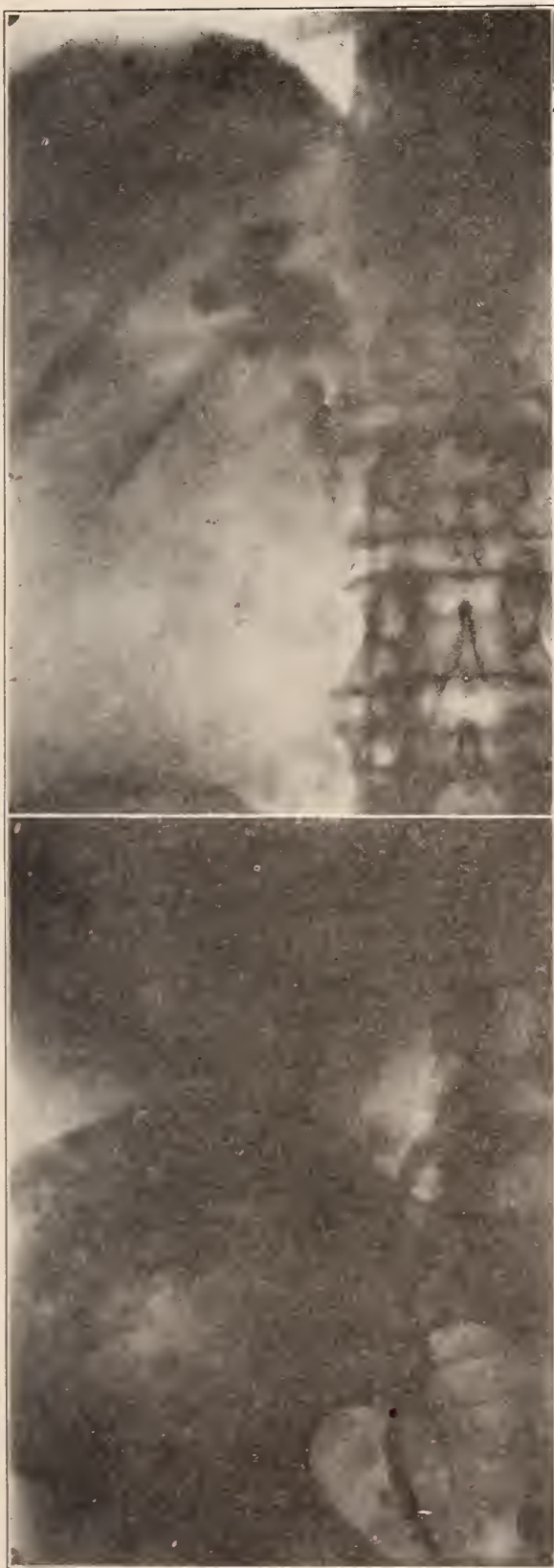


Fig. 1. Pyelogram of the right kidney demonstrating the elongated and distorted inferior calyx.

Fig. 2. Ureterogram of the right ureter demonstrating the bowing of ureter toward the midline, indicating a retro-peritoneal mass.

Only a very slight amount of pain has been noticed, which has been present just below the ribs between right and left nipple line. Pain was sharp but not colicky or radiating in character. The constipation was a very annoying symptom. Blood was noticed in the stool at frequent intervals. The patient complained of no symptoms referable to the genito-urinary tract.

A physician was consulted four weeks previously regarding his gastric discomfort and on examination a large movable mass was discovered in the abdomen filling the entire right hypochondrium.

*Physical Examination*—Patient free from pain, temperature was 98, pulse 72, respiration 30. Mucous surfaces rather pale, conjunctiva clear. Chest entirely negative. Blood pressure 130 systolic, 90 diastolic. Abdomen not distended. No tenderness or rigidity. A mass about the size of a grapefruit in the right abdomen, slightly movable especially toward the midline; it appeared smooth with a cystic feel and a dull percussion note. There was a marked to and fro movement of the mass with each respiration. Rectal examination negative.

*Urine*—Macroscopically and chemically negative. Microscopically, there were some epithelial cells and a few white blood cells. No bacteria. The carbolfuchsin stain for tubercle bacilli was negative.

Blood showed a leucocytosis of 12,100 and 4,200,000 red cells. A differential count showed 77 per cent polymorphonuclears, 20 per cent small lymphocytes, and 3 per cent large mononuclears. Haemoglobin, 83 per cent.

*Phenolsulphonephthalein Test*—After intramuscular injection of 6 mg. of phenolsulphonephthalein, 30 per cent was excreted during the first hour, and 20 per cent during the second.

*Cystoscopy*—There was no evidence of urethral obstruction, no residual urine. Bladder capacity normal. The mucosa showed no evidence of inflammation and there was no calculus, tumor or diverticulum present. There was no apparent abnormality of either ureteral orifice or of the trigone.

*Ureteral Catheterization*—The ureteral catheter was readily inserted on the left side, but it was impossible to introduce the right catheter more than 2 cm. The left kidney secreted normal, clear urine. The urine collected from the right side was cloudy, due mainly to traumatic blood because of the numerous attempts which were made to pass the catheter. On account of leakage around the ureteral catheters, an accurate comparative functional test could not be made. It was, however, apparent that both kidneys were functioning. During the collection period of thirty minutes, 5 per cent was obtained from the right, and 15 per cent from the left kidney.

*Pyelogram (sodium bromide)*—The left renal pelvis normal in size, shape and outline. No dilatation of the calyces.

The right renal pelvis presented a somewhat different picture, as shown in figure 1. The kidney was markedly displaced upward and inward. The capacity of the pelvis was larger than the normal average. The upper calyces of the right kidney were normal in shape and outline. The inferior calyx appeared distorted and elongated to such a degree as to cause it to lie parallel with the ureter for a distance of 4 cm. This latter fact indicated an involvement of the lower pole of the kidney.

*Ureterogram*—Shown in figure 2, demonstrated a very decided bowing of the ureter toward the midline to such an extent as to overlies the vertebral column which gave conclusive evidence that the abdominal mass was retro-peritoneal. The right ureter was somewhat dilated. There was no evidence of a calculus or a stricture present.

*Operation*—February 2, 1923, the abdomen was opened, through a long right rectus incision. A mass some 10 cm. in diameter appeared in the wound. There was some fluctuation and for this reason a large trocar was inserted allowing several ounces of thick bloody fluid to escape. The remainder of the tumor seemed semi-cystic to palpation, and quite firmly glued to the surrounding structures by inflammatory adhesions, especially at the upper pole, where it was separated with considerable difficulty. At this stage it was necessary to make a lateral incision in order to allow more access to base of the mass





Fig. 3. Gross specimen, tumor and right kidney.



Fig. 4. Mesial section of gross specimen

which was found to be the renal pedicle. This was ligated and the mass, including right kidney, was removed. No enlarged glands were palpable. The wound was closed with drainage. The patient left the table in good condition.

**Pathology**—Figure 3 shows the gross specimen which was the right kidney with a large fluctuant oval tumor of the inferior pole, measuring 6 x 5 inches in diameter, and 4½ inches in antero-posterior thickness. The tumor appeared to be well encapsulated but was broken along the inferior border in removal. From this opening a thick semi-solid necrotic brown substance could be expressed. Incision in the diameter of the tumor and kidney disclosed a rather thin fibrous capsule lined by a variable layer of grayish tumor tissue and enclosing the central necrotic material.

The microscopical section through the boundary zone between tumor and kidney tissue showed a very dense fibrous capsule infiltrated in some degree by strands and nests of rather darkly staining cells of epithelial appearance. Towards the center of the tumor there was a thick, dense layer of these same cells with little stroma and necrosis at a variable distance from the capsule. There was no yellow color of the specimen in gross and no lipid containing cells in microscopic section characteristic of hypernephroma. The pathological diagnosis was adenocarcinoma of the kidney, with central necrosis.

**Convalescence**—The patient made a good recovery. He left the hospital at the end of the sixth week in excellent condition and free from symptoms. The last communication was received October 20. At this time he was carrying on his regular duties which he was unable to do before operation.

#### DIAGNOSIS OF KIDNEY TUMOR

Ordinarily three classical symptoms, haematuria, pain with characteristic radiation, and palpable mass are deemed sufficient evidence in the diagnosis of renal tumor. In the case here reported only one of these cardinal symptoms was present.

**Haematuria**—This symptom was entirely lacking. Not only the questioning of the patient but repeated examinations of urine failed to show blood. Careful inspection of the gross tumor specimen gives, however, a very plausible explanation for this

peculiar feature, since there is no communication between the tumor and the renal pelvis. In cases of kidney tumor haematuria is unquestionably the most valuable clue, and usually is the first symptom to cause the patient to consult a physician. The amount of haematuria varies greatly and may occur early or late in the course of the disease.

**Pain**—In the above reported case pain was entirely lacking except for the slight discomfort and burning which was complained of in the epigastric region. Pain was one of the first symptoms of renal tumor in the adult ninety-one of Albarran's 257 cases, and occurred during the course of the disease 134 times in 303 cases. Pain is usually, but not always, felt in the loin.

**Abdominal Mass**—The mass in this case was atypical of kidney tumor, because of the regular surface and the cystic consistency. In adults, a tumor is usually discernible at the time of operation. Albarran's statistics show only fifty-three cases out of 257 in which tumor was the first symptom. Kidney tumor, accompanied by little or no pain, is usually the only symptom to renal neoplasm in children until the cancerous cachexia begins to show itself.

#### DISCUSSION

Contrary to the formerly accepted opinion, carcinoma of the kidney is rare before the fifth decade; the mistaking of mixed tumors for carcinomata is responsible for the large number of these growths formerly reported as occurring in extreme youth.

Carcinoma develops from the tubular epithelium, or occasionally from the epithelium of the pelvis. In some cases the urinary canals may, to a certain extent, persist, and if dilated, may form large spaces. The much discussed intracellular formations of cancer cells are well seen in these growths.

Clinically, the neoplasm may be hard or soft,

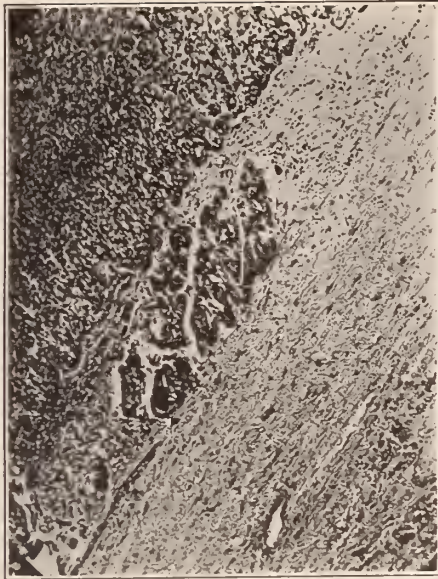


Fig. 5. Adeno-carcinoma of the kidney, section showing boundary zone between tumor and kidney tissue.

more often soft; it may become colloid and may form a fungoid vascular mass. It has been found associated with testicular carcinoma and (in the aged) with calculus. In few cases the growth has broken through the skin. Metastasis occurs most frequently to the retroperitoneal lymph-glands, the lung, and the liver.

The tendency to produce haematuria is due to the infiltration of the tumors. The earlier metastases occur through the lymphatics; later, when the veins have been invaded, carcinomatous thrombi may be carried by these vessels.

If you want to play golf during the annual session of the C. M. A. in Oakland, April 26 to May 1, 1926, please apply at the golf desk, which will be found in a convenient place in the Hotel Oakland during the meeting. Arrangements have been made so that any member of the California Medical Association or guests may enjoy the privileges of many of the Country Clubs in the East Bay district.

Information may also be obtained from any of the officers of the Northern or Southern Medical Golf Association: William H. Kiger is president of the Southern Association, and C. H. Weaver, secretary; while Philip H. Pierson is president of the Northern Association, and Harry E. Alderson, secretary.

The San Francisco District of the California Federation of Women's Clubs held their annual child welfare week recently. Many lectures on various phases of child welfare were given, and clinics were held daily during the week. Dr. Mariana Bertola, president of the Federation of Women's Clubs, was chairman of the week and Mrs. J. A. Axell, secretary.

The next examination for Public Health Nurse Certificate will be held by the California State Board of Health on Saturday, May 8, 1926, at San Francisco and Los Angeles.

All applicants desiring to take this examination must have their application filed by April 20.

ADELAIDE BROWN, M. D.,

Chairman Public Health Nursing Committee,  
San Francisco, March 16, 1926.

## EIMERIA BUTKAI N. SP., A NEW COCCIDIAN FROM MAN

By DAVID CAUSEY \*

**D**UE in part to its rarity, and in part to the difficulty of obtaining suitable material for study, little is known concerning human coccidiosis. Dobell (1919) adequately summarizes our knowledge of this little-known group of parasites. The present paper deals with a new species found in human fecal material from California. I am indebted to Dr. H. E. Butka of the White Memorial Hospital, Los Angeles, for the fecal sample and the following case history:

"Mrs. —. Age 42. Consulted Dr. J. M. Macey February 2, 1925, because of purpuric spots which appeared now and then on the legs during the past six months. These skin lesions gradually fade, leaving yellowish, purplish spots. They are painless, but in the early evening they become more angry-looking, and itch. Other findings include some swelling of the ankles, occasional headaches, slight morning cough with expectoration of a thin material, occasional slight palpitation of the heart, good appetite, bowels constipated. There is some early morning abdominal discomfort, which disappears after moving about.

"There are hemorrhagic areas over both legs up to middle third of thigh, and a few on arms. Urine and blood examinations reveal no abnormalities.

"Stool examination made in Dr. Butka's laboratory revealed the presence of enormous numbers of parasites of coccidia type and some blood.

"During the ten months of observation of the patient her decline in health has been progressive, without definite explanation."

The sample available for study contained numerous coccidia spores, from three to four appearing in every field of an ordinary smear examined under low power. Apparently, no other stages of the life cycle of the coccidium other than the spores are present. The spores are not well preserved, and cytological details are difficult to determine. No other parasitic forms are present.

Measurement of the first one hundred spores found on a stained slide give the following data:

Length: Greatest, 18.0 microns; smallest, 9.0 microns; average, 14.5 microns.

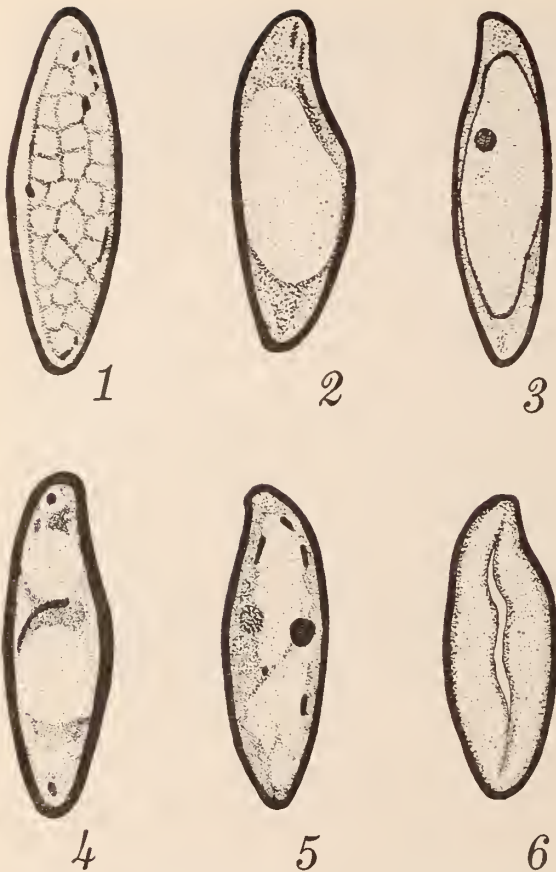
Width: Greatest, 7.2 microns; smallest, 3.6 microns; average, 4.9 microns.

The size and shape of the spores (Figures 1-6) are sufficient to distinguish them from the other species of Coccidia, thus far described from man. They are larger than the oval spores of *Isospora hominis* and are dizoic, whereas the latter has tetrazoic spores. Of the three species of *Eimeria* that have been described from man—*E. wenyoni*, *E. oxyspora*, and *E. snijdersi*—the two latter have spores nearly twice the size of the new species, and are spindle-shaped, i. e., pointed at both ends. *E. wenyoni* has spores of smaller average size which are distinctly oval in shape.

The essential characteristics of the new species are: *Eimeria butkai* n. sp. With dizoic spores of narrow elliptical shape, with one end pointed and slightly turned (Figures 2-6). Spores from 9.0 to

\* David Causey (Department of Biology, Princeton University). A. B., 1921, James Millikin University; A. M., 1922, University of Illinois; Ph. D., 1925, University of California. Scientific organizations: Instructor in Biology, Princeton University. Publications: Papers on protozoology and parasitology.





Figures 1-6. *Eimeria butka*, n. sp. Typical spores showing typical shape and successive stages of development of sporozoites. X 3000.

18.0 microns long, and 36.0 to 7.2 microns wide, averaging 14.5 by 4.9 microns. Oöcysts and other stages unknown. Parasitic in intestine of man.

The patient had the curious habit of eating raw rabbit livers, and a spurious infection of *Eimeria stiedae* was suspected. The size of the spores strengthened this view, although the spores were quite unlike those of *E. stiedae* in form. On the hypothesis that the spores of the latter, derived from the raw rabbit livers, might have been distorted by the digestive fluids, fresh oöcysts from rabbit feces were allowed to develop in water. Such developed oöcysts, each containing the four mature spores, were placed in 0.2 per cent HCl for several hours, and then the mixture made slightly alkaline. No observable change in shape or appearance was seen, nor were immature oöcysts affected. The latter do not develop under such conditions. Prolonged exposure to both the acidic and alkaline solutions failed to cause distortion, and it was concluded that the shape of the spores was not due to any action of the digestive fluids, and were not those of *E. stiedae*.

Dobell and O'Connor (1921), in their discussion of coccidiosis in man, term it "a subject about which very little is known." Again, they say: "No clinically recognizable disease, due to their presence, has yet been observed in man. Even in those cases in which, from the number of oöcysts passed in the stools, a heavy infection appears to have been present, no definite symptoms referable to the infection have

been elicited. . . . Apart from such inferences as can be drawn from similar examples of coccidiosis in animals, nothing definite can yet be said about the pathology, morbid anatomy, pathogenesis, or symptomatology, of intestinal coccidiosis in man." Later, in the same work, they report: "No substance has yet been discovered which appears to have any action upon coccidial infections of the human intestine—or, for that matter, upon coccidial infections of any organ of any host."

This discussion of a parasitic infection or infestation without symptoms, and which does not respond to medication, makes it desirable that any available material, particularly from autopsy in known cases of coccidial infection, be carefully examined. So far as our knowledge at present goes, human coccidiosis cannot be regarded as other than a curiosity.

#### LITERATURE CITED

- Dobell, C.: 1919. A revision of the coccidia parasitic in man. *Parasitology*, 11, 147-197. Pl. VIII, 2 figs. in text.  
Dobell, C. and O'Connor, F. W.: 1921. The intestinal protozoa of man. London, ix+, 211 pps.

#### ABUSE OF "RECIPROCITY"

By LOUIS E. MAHONEY \*

*In his letter of transmittal Doctor Mahoney, who is a diplomate of the National Board of Medical Examiners, says: "Certain disagreeable and unethical practices with which I have recently been unfortunate enough to come in contact have convinced me that the reciprocity feature of the State Medical Practice Act serves merely as a loophole through which many poorly trained, and unscrupulous, medical men gain licenses to practice in this state."*

*In endorsing this article for publication, an Editorial Councilor writes: "The public, as well as the profession, is interested—in fact, we do not want to carry the idea that this is a subject for consideration of the profession alone."—Editor.*

*Discussion by N. N. Wood, Los Angeles; Walter A. Bayley, Los Angeles; Granville MacGowan, Los Angeles; Walter V. Brem, Los Angeles.*

RECENT developments have brought clearly into view certain injustices in the reciprocity provisions of the California Medical Practice Act. A reference to the directory for the current year, published by the Board of Medical Examiners, shows that by far more candidates for license in this state make use of the reciprocity features than of the written examination. In 1923, 183 candidates were given certificates on the basis of written examination, and eighteen licensed on presentation of government credentials, Army, Navy, and Public Health commissioned officers largely, making a total of 201. During this same year, 492 candidates were licensed by reciprocity. In other words, two men were given the right to practice in the state by reciprocity to every one that gained the right by successfully passing a written examination. In 1924, 249 were licensed on the basis of written examination, and sixteen presented government credentials.

\* Louis E. Mahoney (Security Bank Building), Santa Monica, Cal.). M. D. University of Colorado. General practice. Hospital connections: Los Angeles General. Appointments: Medical Reserve Corps, U. S. Army. Diplomate of National Board of Medical Examiners. Scientific organizations: Los Angeles County Medical Association, California Medical Association, Fellow A. M. A.

During this same year 375 candidates were licensed by reciprocity. Forty-one holders of licenses in California applied for reciprocity in other states during 1923. In 1924 nineteen made such application. Thus it will readily be seen that for every reciprocity certificate granted to California physicians in 1923, twelve such licenses were issued in California to men from other states. The year of 1924 shows an even greater disparity, as in that year for every California physician securing a license in another state on the basis of reciprocity, twenty out-of-state men were granted permission to practice in this commonwealth. A study of statistics furnished by the State Board of Medical Examiners shows that the majority of applications for reciprocity certificates come from those states which show the largest registration of practitioners of the healing art. It is well known that California is the *second* highest state in the union in the per capita proportion physicians to population. These figures do not take into account Osteopaths, Chiropractors, Christian Scientists or other cultists with whom California is overly well supplied. The available supply of physicians being so large, there does not seem to be any pressing necessity for the reciprocity feature of the Medical Practice Act.

The applicants for reciprocity in many instances are men of the highest scientific attainments and of excellent standing in their community. However, there is a large percentage of applicants who have lost sight of the scientific progress of medicine, who have failed to keep up with the march of progress and who add little or nothing to the profession. A large number of poorly trained practitioners tends to lower the standard of every man in that community, and leads to sharp and sometimes discreditable methods of practice. The individual who has neglected to keep abreast of current medical advances in Iowa, New York, Arizona or any other state is not likely to experience a radical change of heart upon moving to this locality. On the other hand the man who has been constantly in the forefront of medical progress, who has continued to work and study will be a source of pride and inspiration to his colleagues and makes a very desirable addition to any community. California has need of such individuals.

Poorly trained and unscientific practitioners are partially responsible for the growing distrust of the medical profession, of which we see so much evidence in California. Such men offer a great deal of indirect assistance to the cultist and not infrequently openly consort with such opponents of scientific advancement and high ethical standards. The itinerant physician who is willing to leave friends and practice of years standing in his own community brings nothing of value to the state of his adoption.

The settlement in any community of large numbers of older men who have lost that youthful enthusiasm and zeal for public welfare which is felt by almost every recent graduate works a decided hardship on younger men who are carving out their medical careers. The acquisition of a clientele is made much harder and it becomes trebly difficult

to educate the public to the value of the newer scientific discoveries.

Written examinations, properly and fairly conducted, give a very efficient means of combating this unjust state of affairs. Any recent graduate of average training who has completed his hospital work within the last four or five years has little difficulty in passing such examinations as are now given by the State Board. They are just, fair, and require very little time spent in review. What is true of the recent graduate is likewise true of the well-trained professional man who has remained in touch with medical progress by attending medical meetings, reading journals and serving on hospital staffs. Such an individual will find no difficulty in passing the examination, after several weeks or a month spent in intensive study. However, on the other hand, the man who has neglected these essential features of a well balanced, well ordered and useful medical career will feel a decided reluctance toward taking any ordinary written examination. The oral examination now provided by the Medical Practice Act fails to give a satisfactory estimate of a candidate's educational qualifications or real medical worth. In order for a candidate of this kind to be successful in passing the written examination, an intensive review for several months would be necessary and there is nothing which would be so valuable to him and to the community at large as such an intensive and thorough review. He would find new inspiration in again resuming the habit of study. Written examinations work no hardship on those properly prepared, but they are very effective in discouraging and weeding out incompetents.

There is now and always will be room in the profession for young, aggressive, thoroughly trained men. The three Class A medical schools in California graduate on an average one hundred and fifty doctors per year, the largest proportion of whom remain in the state. These added to the numbers of recent graduates of first class Eastern institutions, who come here, plus a reasonable number of better qualified applicants from other states who might wish to take the written examination, would furnish a supply of new physicians sufficient to compensate for losses within the profession and to care for the increase in population.

The purpose in writing this article is to call the attention of the profession and the public to the disproportion existing between the number of licenses issued on the basis of examination and those issued by reciprocity, to show that California is the loser and not the gainer through the operation of this provision and to suggest a simple and effective measure for restoring medical standards and thus insuring more economical, up-to-date, scientific medical service to the public in general.

#### DISCUSSION

N. N. WOOD (Los Angeles General Hospital, Los Angeles)—I have read this paper with interest and have also asked the chairman of the medical board of the attending staff, Fitch C. E. Mattison, to read it, and I have discussed it with him.

It does look as if reciprocity was being over-worked in



California and as if there might be an advantage in somewhat reconstructing its operations.

Generally speaking, I believe that the principle of reciprocity is right and that any state could well afford, if it happens to be one of the more popular states, to give a little more than it receives in order to maintain the feeling of unity and hospitality which I feel a great profession should encourage—in other words, it is desirable, even at some cost, to assist in building up a real professional morale and esprit de corps.

WALTER A. BAYLEY, M.D., (802 Professional Building, Los Angeles)—I have read Louis E. Mahoney's letter entitled "Abuse of Reciprocity," with considerable interest.

It seems to me that a written examination for all applicants would have a tendency to keep out undesirable medical men. However, this would be a hardship to the capable experienced man who had been practicing for many years in one of the specialties, and who should be entitled to some credit for his experience.

If there are twelve doctors locating in California to one leaving the state under the provision of reciprocity, surely some change in the law should be made whereby this condition could be corrected.

GRANVILLE MACGOWAN, M.D. (Brack Shops Building, Los Angeles)—The presentation of the subject by Doctor Mahoney is quite interesting. I possess the right to practice medicine in four states of the Union, by reason of license—New York, Pennsylvania, Georgia, and California. I do not know how many states I am entitled to practice in, by reciprocity, for I have never given this subject a minute's consideration. I am possessed of the idea, that holding my diploma from a first-class college, I should be entitled to practice medicine, without examination, anywhere within the territorial limits of the United States government.

Under the law, there is no chance for a closed shop in the medical profession in California, because California is the most desirable of all places in the United States to live in, and consequently there must necessarily be more people who would take advantage of the articles and agreements of reciprocity to enter the state than there are, or will be, to use the privilege of reciprocity by moving to another state.

In attempting to inaugurate a change in the present custom, it is very well to consider that the standard of medical practice in California is probably as low as it can well get; that those whom we call "cultists" have the same legal right, in practice, that we have, for it has pleased the voters of the State of California to bring about this condition, after prolonged public discussion of the merits and demerits of the medical systems which have sought an equal recognition with the regular medical profession.

I see no object of value to be gained by compelling those of the regular medical profession, who are entitled by reason of reciprocity, to be licensed to practice in the State of California, and who, either for economic reasons or on account of personal ill health, desire to practice the profession of medicine here, to be obliged to take a written examination, even though they be a "little backward in their medical attainments."

WALTER V. BREM, M.D. (Pacific Mutual Building, Los Angeles)—Doctor Mahoney has discussed a subject in which I have been deeply interested during the three years of my service on the State Board of Medical Examiners, and I find that I am in hearty accord with the views which he expresses.

Recently I had occasion to publish my views in a letter to the Journal of the American Medical Association on June 13, 1925.

It is my opinion that the efforts of the State Board of Medical Examiners to raise the average efficiency and integrity of the medical profession of California are considerably impaired by the reciprocity evil.

As chairman of the reciprocity committee of the State Board of Medical Examiners, I recommended that a bill be introduced at the last session of the legislature, abolishing the reciprocity sections of the Medical Practice Act.

This bill was introduced by Senator Lyons, and it passed the senate by unanimous vote. It was amended,

however, when it reached the house, and finally died in committee, greatly to my disappointment.

DOCTOR MAHONEY (closing)—It has been a genuine pleasure to learn the personal views of the esteemed gentlemen who have discussed this treatise. The essential fact remains, however, that in 1923, for every California licentiate who was granted reciprocity in other commonwealths, twelve individuals were given the right to practice in California. In 1924, for every reciprocity certificate issued by another state, to a California licentiate, twenty licenses were granted on the basis of reciprocity permitting men to practice medicine in California. Were all such applicants of the forward-looking, progressive, scientific type of practitioner, there would be no particular menace in the situation, but it is an unfortunate truth that a great many of these applicants are not of high professional caliber. A written examination, while discouraging incompetents, would work very little hardship on the up-to-date and well trained medical man.

### A MESENTERIC CHYLOUS CYST

By CHARLES G. LEVISON\* AND MAST WOLFSOHN\*

(From The Surgical Service, Mount Zion Hospital)

DISCUSSION by John Francis Cowan, San Francisco; Leo Eloesser, San Francisco.

MESENTERIC chyloous cysts are comparatively rare, and the pre-operative diagnosis even rarer. The first diagnosis of these cysts was made in 1842 by Rokitsky at a necropsy. Since then there have been about two hundred cases reported. The cysts are usually found in the mesentery of the small intestine near the ileo-cecal valve, although any part may be the point of origin. The wall may be that of paper thinness to one of several millimeters in thickness; the inner surface is usually smooth and shiny. As a rule there have been no enlarged glands in the adjacent mesentery. The contents have been listed as cholesterin, fat globules and leucocytes. In the vast majority of cases a chemical examination was not made. There are no distinctive symptoms. The size and position of the cyst causing pressure or obstruction to nerves, vessels or viscera may resemble appendicitis, volvulus, cholecystitis, chronic dyspepsia, and many other diseases.

Treatments have included aspiration, incision and drainage and enucleation. Where the bowel has been involved, resection of adjacent bowel with excision of the cyst has been practiced.

The classifications of Moynihan and of Carter are complete and useful. Moynihan classifies them as:

1. Serous cysts—unilocular or multilocular—containing clear serous fluid. Cause: Questionable

\* Charles Gabriel Levison (870 Market Street, San Francisco). M.D. Cooper Medical College, 1889. Practice limited to surgery since 1906. Previous honors: Colonel, Medical Corps, A. E. F.; Commanding Officer Base Hospital No. 47. Hospital connections: Visiting surgeon and president of staff of Mount Zion Hospital. Scientific organizations: Fellow American College of Surgeons (one of the founders); member The Association Francaise de Chirurgie; Fellow A. M. A.; member California Medical Association, and San Francisco County Medical Society.

\* Mast Wolfsohn (490 Post Street, San Francisco). M.D. Harvard University. Practice: General at present. Later to be limited to Surgery. Hospital connections: Mount Zion Hospital. Publications: Research on the Veins of the Head and Gill Region of *Heptanchus Maculatus*, Discovering of a Venous Sinus named the Danielian Sinus after J. F. Daniel (Professor of Zoology, University of California). Published in textbook "The Elasmobranch Fishes," by J. Frank Daniel, Ph.D. "Herniation of the Cecum Through Erosion of Muscle" is another article written, with x-ray discussion by Lloyd Bryan.

dilatation of lymph channels or hemorrhages between the layers of the mesentery.

2. Chylous cysts—unilocular or multilocular—containing milky fluid. Cause: Questionable obstruction to some of the lacteals. These are the most numerous, being about one-half of the reported cases.

3. Hydatid cysts. Cause: *Taenia echinococcus*.

4. Blood cysts. Cause: Hemorrhage into cysts.

5. Dermoid cysts. Embryonic in origin.

6. Cystic malignant disease. Questionably of embryonic origin.

Carter classifies them as:

1. True mesenteric cysts, divided according to origin, into (a) Embryocystomata; (b) Enterocystomata: Tumors of Meckel's diverticulum and tumors from sequestration from the bowel; (c) Obstructive.

2. Dermoid cysts.

3. Cystic malignant disease.

4. Parasitic.

Report of another chylous cyst:

Mrs. G. Age 47. Married. Admitted to hospital July 8, 1923. Complaint: Loss of appetite and weight with persistent vomiting. F. H. and P. H.: Essentially negative. P. I.: One year ago the patient complained of hunger pains occurring about every two hours. These continued up to six months ago when she began having "bilious spells." There was never any jaundice. About six weeks ago she lost her appetite and since then abdominal distention, aggravated by eating, has been persistent. For the past three weeks the patient has been vomiting after every meal. No clay-colored or tarry stools have been noticed. She has lost about thirty-five pounds during the last year, the greater part being lost the last three months.

Physical examination: Head and neck: Negative. Chest: Lungs normal throughout. Heart normal, B. P.: 130/80. Abdomen: A large smooth, non-tender, non-painful mass extended in the left abdomen from just above the level of the costal margin in the nipple line down to the level of the anterior superior spine of the ileum. It extended medially to the inner border of the left rectus muscle and laterally to the left anterior axillary line. It was freely movable and had the feeling, on palpation, of a large spleen. It was flat to percussion in the middle of the mass. It moved with respiration. Liver: Negative. Spleen: There was a question whether it was felt or was connected with the mass. Left kidney: Question if it was connected with the mass. Right kidney normal. Vaginal and rectal examination: Negative. Extremities: Negative. Reflexes: All normal; pupils round, regular and react to light and accommodation. Laboratory: Urine 1012, alkaline; no albumen, sugar or diacetic acid. Sediment shows many epithelial cells and a few red blood cells. Blood: Hgb. 90 per cent. RBC 4,560,000, WBC 7750, 72 per cent polymorphonuclear neutrophils, 15 per cent small lymphocytes, 8 per cent large mononuclear, 5 per cent transitionals. Wassermann: Not taken. X-rays: G. I. Fluoroscopy: Lung fields clear. Heart and arch, negative. No delay or defects in esophagus. Stomach low, slightly to the right. Peristalsis moderate. No defects. Pylorus smooth. Cap large, smooth in outline, and empties moderately. Duodenum curves to right. No dilatation or delay. No six-hour gastric or duodenal residue. Previous meal in terminal ileum and caecum. Twenty-four-hour examination: Meal into transverse colon. Mass felt independently of the stomach. Barium enema, large dilated sigmoid, narrow, irregular constriction of the distal portion of the transverse colon. Large mass felt in splenic region. Barium enema repeated. No evidence of abnormality in the colon. X-ray diagnosis: Splenic tumor. Cystoscopy and catheterization of ureters give normal urine from bladder and both kidneys. Kidneys injected and x-ray plates taken which showed incomplete injection and the left kidney somewhat enlarged.

Differential diagnosis involved consideration of: (1)

tumor of the spleen (2) tumor of the left kidney (3) mesenteric cyst.

The radiologists supported a diagnosis of a splenic tumor. However, the surgeon (Doctor Levison) considered it a mesenteric cyst and operated upon the patient on July 9, 1923.

Details of operation: The skin and deep subcutaneous tissues were infiltrated with  $\frac{1}{2}$  of 1 per cent novocaine and a transverse incision made two inches above the umbilicus extending from the outer border of the right rectus muscle to the left mid-axillary line. At the median end of the incision a vertical incision extending cephalad for two inches was made. When the peritoneum was opened, a large, whitish mass was found in the mesentery, which felt tense, fluctuated on pressure and was obviously cystic. There was some free chylous fluid in the left abdomen. Due to nervousness of the patient gas-oxygen-ether anaesthesia was induced. The cyst proved to be in the root of the mesentery, about the region of the first and second lumbar vertebrae and anterior to the pancreas. Transverse colon was cephalad to the cyst. An attempt was made to dissect out the mass, but the slightest manipulation of the thin multilocular wall caused oozing and, at times, spraying of chylous fluid from many points of the cyst wall. Separation of the cyst from the mesenteric wall seemed to open up large lymph spaces. The mass apparently was one large sac with many small dilated spaces around it, there being no definite boundary line. Dissection was impossible and during manipulation the cyst wall ruptured with the escape of about a quart of chylous fluid. Owing to the difficulty of dissection in the mesentery and the possibility of the blood supply in the adjacent bowel being affected and also the risk of prolonging the anaesthesia, it was deemed inadvisable to continue the operation. The base of the cyst was searched for but not definitely ascertained. It seemed to be near the superior border of the pancreas.

The edges of the sac were marsupialized by stitching them to the edges of the peritoneum. This part of the peritoneum was not closed. A cigarette drain about twelve inches long was carried down to the base of the cyst and stitched there. The abdomen was closed in three layers, three Penrose tube drains were inserted, down to the fascia, and the patient left the table in good condition. Laboratory examination of the fluid showed cholesterol, fat, and fatty acids. No section of the cyst wall was removed for examination.

The patient made an uneventful recovery and the wound healed by first intention. She was put on a general diet the fourth day. She was up in a chair on the seventh day and went home on the fifteenth day. The drain was left in place for one and one-half months, the tube being gradually removed during the last fortnight. There was no drainage aside from a slight amount of serum. The patient is now up and about her daily duties without apparent discomfort. Her appetite is good, she is feeling well and her sinus is closed.

#### DISCUSSION

JOHN FRANCIS COWAN, M.D. (Stanford University Hospital, San Francisco)—As the authors state, these cysts are rare and present no signs or symptoms which are pathognomonic. The pre-operative diagnosis is therefore all the more creditable.

It is easy to understand the origin of blood, dermoid and hydatid cysts, but chylous and serous cysts are not so easily explained. I have never seen a mesenteric chylous cyst, but I have observed and operated upon patients with two different pathologic conditions which may be mistaken for such cysts. The first was an intra-peritoneal cyst arising in the region of the duodeno-jejunal angle. Intra-peritoneal cysts arise from fossae of the peritoneum, in the ileo-cecal, duodeno-jejunal and inter-sigmoid regions. These fossae may become enlarged and form the seat of a hernia. By inflammatory reaction the opening into the peritoneal cavity may become obliterated, when the sac fills with serous effusion. In my case the lymph nodes in the mesentery near the duodeno-jejunal angle were enlarged and there was evidence of old inflam-



matory reaction in the fibrous thickening and contraction of the mesentery.

The second condition is that of tuberculous abscess in the mesentery of the small bowel. I have had two of these in children, one of which was the size of a large orange, situated in the midline above the symphysis pubis. This was at first considered to be a distended bladder. But catheterization, however, showed a small amount of clear urine and did not in any way influence the size or position of the mass. It was found that when the patient assumed the knee-chest position and the abdominal wall became relaxed, the mass was displaced upward and could easily be moved from side to side. For this reason I thought of a mesenteric cyst.

In the second case the mass was to the left of and on a level with the umbilicus. This, however, was not freely movable. Operation revealed a large tuberculous abscess in the leaves of the mesentery in each case. The first of these was removed en masse, the second incised and drained. Each patient made an excellent recovery.

These differ from encysted tuberculous peritoneal effusions in that the latter are more fixed and even if they appear to be round in shape are usually connected to the anterior abdominal wall. These encysted effusions may occupy the midline of the abdomen.

LEO ELOESSER, M. D. (Butler Building, San Francisco)—Like Doctor Cowan, it has not been my fortune to operate upon a patient for chylous cyst, but I have seen other cysts, difficult to distinguish from them.

Pancreatic cysts are usually less movable, but in 1920 I saw, with Dr. H. P. Hill, an old lady who had a movable tumor of the epigastrium, some 8 cm. in diameter, which pushed the stomach downward and to the left, and which throbbed with the aortic pulse, but was not itself expansile. We thought the cyst most likely to be of the pancreas. The next day it ruptured, so that I hurriedly opened the abdomen and found a moderately tense red cyst, covered by dilated veins, lying between the liver and stomach. The hand could be introduced between the cyst and the liver. There was apparently no connection between them. I marsupialized the cyst, and the patient made an uneventful recovery. I thought I was dealing with a pancreatic cyst, but sections of the wall contained liver cells and the pancreatic ferments were absent in the fluid. The growth was a cystadenoma of the liver.

Encapsulated intra-abdominal abscesses and large movable abdominal tumors from suppurating glands of the mesentery are not so very rare. One such tumor in a girl who was afterwards sent to the San Francisco Hospital was twice the size of the one in the above-mentioned patient. X-ray films of the abdomen taken before the administration of a barium meal, will usually reveal shadows of chalky or cheesy deposits, which permit of a diagnosis even without opening the abdomen. Large ovarian cysts may also present diagnostic difficulties. Echinococcosis wall gives a characteristic complement fixation reaction, but echinococcus infection is as rare in this country as the chylous cysts themselves.

DOCTORS LEVISON AND WOLFSON (closing)—We thank Doctors Cowan and Eloesser for their discussion of this paper and read with interest their cases cited. We will close the discussion with Donoghue's remarks: "In the literature on cysts of the lesser peritoneum one finds few reported, apart from those credited to the pancreas; it is often so difficult or even impossible, to recognize during operation, the precise origin of any individual cyst; there are so many possible sources from which cysts may develop that one is forced to believe that operators and writers have too often assumed their pancreatic origin without sufficient diagnostic data."

A physician should always be willing to call a consultant. This attitude is looked upon with favor by the family. In all severe cases one should have a consultant, not only to cover the patient's illness, but to guard against any legal difficulty that may follow, for example, an attempt to break a will, a claim of unsound mind. In these days of dishonesty, one must be covered at every angle.—Medical Review of Reviews.

## EDEMA FOLLOWING THE USE OF INSULIN

By D. M. ERVIN \*

*The edema of insulin is nothing more than colloids under the influence of two different types of chemicals—one the electrolyte affecting the dispersion, the other the non-electrolyte, only preventing the water from being "pulled in" to the colloid by the dispersion caused by the other.*

DISCUSSION by Paul G. Woolley, Los Angeles; T. Henshaw Kelly, San Francisco.

WITH the use of insulin edema has begun to appear in the diabetics, a fertile field for the salt retention followers who have lost no time in putting forth their favorite theory. To the colloid chemist, however, who is able to imitate in a simple manner the entire affair without the use of salts, the salt retention theory is both unnecessary and inadequate.

The clinical observation that the diabetic does not have edema but does die the same cerebral and respiratory death (save convulsions) as the nephritic, is quite common but has received scant attention.

While the diabetic and nephritic comas are fundamentally identical, it is not within the scope of this paper to discuss the applicability of the Gibbs-Donnan law to the physical chemistry of coma. It is intended to discuss only the edema which appears under the use of insulin in the diabetic as a simple and natural conduct of hydrophilic colloids under the influence of two different types of chemicals, electrolytes and non-electrolytes, which both affect the water contents of the colloid.

When colloids of the hydrophilic type are placed in acids swelling takes place. This is because the colloids become under the influence of the acids more dispersed; that is, the colloid particles become smaller. The more the particles become dispersed, the more their internal force permits the water to be drawn in, and as the water is drawn in swelling takes place. It is not due to the swelling that the dispersion takes place; but it is due to the dispersion that water is permitted to be drawn in. Acids produce swelling by increasing the dispersion. Salts decrease swelling by decreasing the dispersion.

The non-electrolyte, while decreasing the swelling, does not do so by affecting the dispersion of the colloid. It is an interface or membrane equilibrium.

The power to hold water by a colloid is decreased by the presence of the sugars as by the presence of the salts, but their action is entirely different. This may be experimentally evidenced by the effect of the salts and the sugars upon the liquefaction point of gelatine under the influence of acids. The liquefaction of gelatine under the influence of acids is a dispersion of such high degree that the colloid particles lose their internal tension and become liquid. Upon this liquefaction point may be tested the effect

\* Dwight M. Ervin (909 Hyde Street, San Francisco). M. D. Cincinnati University, 1917. Other degrees: A. B. University of Wooster, 1910. Graduate study: Internship Clin. U. Medical School. Previous honors and services: Two years Associate Professor of Pathology. Practice limited to internal medicine since 1925. Publications: Relation of the Pancreas to Glycogen Formation (J. Lab. and Clin. Med. 1920); Relation of Glycogen to Cell Structure (J. Lab. and Clin. Med. 1920); Relation of Intracranial Pressure to Convulsions (J. A. M. A. 1917).

of salts and of glucose testing their power to change the dispersion.

Let us set up a series of tubes of gelatine of 1.5 per cent, ranging through increasing concentrations of acids as:

N	N	N	N	N	N	N	N	N	N
200	180	160	140	130	120	110	100	90	80

The tubes that are underlined are those that remain liquid; the others became solid upon standing. If salts affect the dispersion, tending to decrease it against the effects of the acid, the point of liquefaction will be moved towards the right by the addition of sodium chloride. A higher concentration of acid will be necessary to produce liquefaction in the presence of the salt than without.

M NaCl	N	N	N	N	N	N	N	N	N	N
100	200	180	160	140	130	120	110	100	90	80

M NaCl	N	N	N	N	N	N	N	N	N	N
50	200	180	160	140	130	120	110	100	90	80

Under the influence of the sodium chloride it was necessary to have  $N_{100}HCl$  to bring about liquefaction. Now in a similar manner we may test the action of glucose.

Glucose

1%	N	N	N	N	N	N	N	N	N	N
	200	180	160	140	130	120	110	100	90	80

2%	N	N	N	N	N	N	N	N	N	N
	200	180	160	140	130	120	110	100	90	80

4%	N	N	N	N	N	N	N	N	N	N
	200	180	160	140	130	120	110	100	90	80

5%	N	N	N	N	N	N	N	N	N	N
	200	180	160	140	130	120	110	100	90	80

Through the entire series  $N_{120}HCl$  is as effective in the liquefaction of gelatine in the presence of 1, 2, 4, 5 per cent glucose as it is in the absence of glucose. Glucose does not affect the dispersion of the colloid.

On the other hand, let an interface be established by having the gelatine in the form of a cube and immersed in  $N_{120}HCl$  and  $N_{120}HCl$  plus 5 per cent glucose. The cube in the acid and glucose does not swell nearly so much as in the acid alone. Glucose does not affect the dispersion of the colloid, but does affect the swelling when an interface is present between the colloid and the glucose solution.

In the nephritic there is present more than the normal amount of acids; in the diabetic there is present more than the normal amount of acid and glucose.

As the acids increase in the nephritic, water is "pulled in" by the increased dispersion. If a membrane is present, as the eyeball, tenseness develops. As the acids increase in the diabetic, water is pre-

vented from being "pulled in" by the increase of glucose and with the increase of dispersion with no increase of the water content, the system tends towards liquefaction or softening, as in the eyeball of the diabetic coma.

As it is only necessary to remove the glucose which does not affect the dispersion from the diabetic to convert the diabetic tissue into the nephritic tissue, to convert the soft flabby tissue into the tense swollen tissue, it is easily seen why edema is appearing under the use of insulin.

The eyes of the diabetic coma and the nephritic coma can readily be duplicated with gelatine inclosed in diffusion membranes and immersed in acid and acid and glucose.

With the use of insulin the dispersed unswollen colloids of the diabetic are being converted into the dispersed swollen colloids of the nephritic by the rapid lowering of the glucose content of the body. The glucose, by the use of the insulin, is being removed more rapidly than the acids, leaving behind dispersed colloid that may now swell.

It must be noted that the swelling of the colloid is a result in the conduct of colloids, the serious factor being the state of the dispersion upon which state of internal energy the colloid depends for its ability to do work and upon which the body becomes a workable machine. Whether in the nephritic or the diabetic the conception of importance is the state of dispersion. We are notified of it in the nephritic by the swelling, but not in the diabetic; yet it is just as surely and seriously there.

The edema of insulin is nothing more than colloids under the influence of two different types of chemicals—one the electrolyte affecting the dispersion, the other the non-electrolyte, only preventing the water from being "pulled in" to the colloid by the dispersion caused by the other.

DISCUSSION

PAUL G. WOOLLEY, M. D. (Pacific Mutual Building, Los Angeles)—I hesitate to go into detail in a discussion of this article for the reason that I am too poor a colloid chemist to do anything but make a mess of the thing. However that may be, I might say this much, that the fact that edema occurs after the administration of insulin has been observed of course, but so far as I know, no systematic experimental explanation of the phenomenon has been put forth until this one of Ervin's. There are many workers who will probably disagree with Ervin's interpretation and among them will be those who disagree with Martin Fischer's formulation of the cause and treatment of the so-called, and mostly mis-called, nephritides.

Ervin's experiments point to the fact that edemas of diabetes are pure edemas due to the withdrawal—to the destruction—of a substance (glucose) which protects the tissue proteins from taking up water in the presence of abnormal amounts of acids. If this interpretation is true, then it should be possible to apply it therapeutically and upon the appearance of an edema following insulin, to dissipate it by the careful use of alkalies and salt solutions.

T. HENSHAW KELLY, M. D. (490 Post Street, San Francisco)—Like Doctor Woolley, I am too poorly versed in the lore of colloid chemistry to attempt a highly refined, technical discussion of Doctor Ervin's paper. However, there are one or two points that I would like to argue about.

Firstly, being a pupil of Fischer in the days of "oedema," the question of "interface" sounds to me somewhat ultra-conservative. It has been more or less the custom of those dealing in the colloidal theories of tissue structure to frown upon cell membranes, endothelia, etc.,



which might partake of the nature of interfaces, and to ascribe the changes in water content of tissue largely to internal factors or dispersion states. I am quite interested, therefore, to hear Ervin referring to interface phenomena when the glucose content of the tissue which is going to swell is already high.

Secondly, in discussing this question with Dr. Dwight Shephardson of San Francisco, he made the statement that edema had not occurred in his series of cases except when the blood sugar had been reduced to 50 or 60 mgs. or below, this marked reduction being accompanied by evidence of myocardial weakness. The myocardial weakness and the edema disappeared when the blood sugar was raised to 100 mgs.

These two points do not add any great weight to the discussion, but they interest me and may serve to draw further interesting explanations from Doctor Ervin in closing.

DOCTOR ERVIN (closing)—In answer to Dr. T. H. Kelly, I would say that I by no means limit the idea of an interface to that of a membrane. Nothing was further from my mind than to suggest that a cell should have a membrane. The membrane of the physiologists is too limited and special a case to be held seriously in biology. It is only an artificial method of effecting the coefficient of distribution of a solvent between two systems. Nor is a membrane of such a type necessary to produce Donnan-Gibbs equilibrium, a surface upon either side of which a solvent has not the same degree of solubility.

By interface I meant a surface of discontinuity across which at equilibrium the components of either system have the thermodynamic potentials equal but not necessarily the concentrations. Such a surface a gelatine cube would present when in contact with water, air, etc.

The question of cardiac inefficiency when the blood sugar is below 80 mg. does not in itself affect the nature of the physico-chemical system. I have a patient who will develop edema when the urinary sugar is below 2 per cent. This is clearly a cardiac condition and yet not an underfed heart. The dispersion of the colloid is there when the urinary glucose is 5 per cent, but not the swelling usually associated with dispersion. With proper care of the heart the edema disappeared with the urine negative for glucose.

Another instance of this point I had occasion to observe in a renal diabetic. This patient had been placed upon 75 units of insulin per day in an effort to free the urine of glucose. The blood sugar during the time I had occasion to observe her ranged between 75 and 85 mg. At no time was there present any edema. It is one of the physiological facts of note that the heart muscle is capable of continuing its work upon small quantities of glucose and oxygen.

Again the softening of the eyeballs cannot be explained upon cardiac failure. It does not occur in such. More and more diabetes takes a place as a disease of structure rather than of oxidation.

In answer to Doctor Woolley I might say that the reversal of a colloid in hydration capacity and dispersion is not so simple as it first appears. The linkage of the amino acids may be indicated by a complicated chemical formula which we will omit.

When an acid stronger than the acid group of the amino acid is added, there takes place a distribution of the amino group between the two acids.

After this, though we may add an alkali, we are only adding one more component to enter into the distribution and we only in part reverse the first change.

Not only do we fail to reverse the dispersion to its identical former self, but we fail likewise to restore the emulsion broken by the dispersion.

About the logomachy of the pathologists, I have no concern. It would seem, however, that the introduction of physico-chemists' ideas, that are concise and well defined, into pathology would go a long way toward concise and well defined ideas of pathology and more frequent use of the expression, "we do not know."

If you look at a bachelor, you become a little more reconciled to your husband.—Lady Astor.

## LABORATORY AIDS IN THE DIAGNOSIS AND CONTROL OF ECLAMPSIA

By HENRY A. STEPHENSON \*

*The Editorial Councilor—himself an eminent obstetrician—who evaluated Stephenson's contribution for the editor, says: "I have read this paper very carefully and find it most excellent, a paper which any obstetrical journal would be glad to get. It will make a very creditable article for CALIFORNIA AND WESTERN MEDICINE."*—Editor.

*The more elaborate tests used for the determination of kidney and liver function have no great value in eclampsia.*

*Blood pressure readings and routine urinalysis, including a study of the urinary sediment, give us the most valuable information in the diagnosis of this group of toxemias.*

*Discussion by M. H. Ross, Los Angeles; T. Addis, San Francisco; J. M. Slemons, Los Angeles; Frank W. Lynch, San Francisco.*

DURING or immediately following the termination of pregnancy, there occurs in a small percentage of patients a chain of symptoms consisting of headache, edema of the extremities, visual disturbance and epigastric pain. Albumin and casts are seen in the urine. The blood pressure is usually elevated. This condition has been called pre-eclamptic toxemia. The addition of convulsions followed by coma is termed eclampsia.

There is some question as to whether the pre-eclamptic toxemia is the forerunner of eclampsia or whether it is a distinct entity. According to Harris, the after effects of the pre-eclamptic condition are more pronounced and last for a longer period than do those of the eclamptic condition. Harris questions whether eclampsia would always follow, were the patients with pre-eclamptic toxemia allowed to proceed with the pregnancy. Few of us have the courage to allow pre-eclampsia to continue.

Other observers go further and attempt to classify toxemia with the above symptoms as "hepatic" or "nephritic," according as the symptoms and findings point to primary liver or kidney disturbance. This differentiation seems difficult in the light of our present knowledge as we shall try to show later, and, from the standpoint of immediate treatment, is unnecessary.

The incidence of the disease among obstetrical patients is about 2 per cent. Some investigators have reported an incidence as high as 3 per cent, but certainly in this country this figure seems too high. However, Stroganoff states that 24,000 mothers and children die each year in Europe and the United States as a result of the condition. This is indeed a very large number and justifies renewed efforts to prevent or control the disease. It is with this thought in mind that I have reviewed the recent literature on strictly laboratory methods in the diagnosis and control of eclampsia.

The details of these laboratory procedures are

\*Henry Augustus Stephenson (490 Post Street, San Francisco). M. D. Johns Hopkins University, 1910. Practice limited to Obstetrics and Gynecology. Hospital connections: Lane and Stanford Hospitals. Appointments: Assistant Clinical Professor, Obstetrics and Gynecology, Stanford University. Publications: "Mechanism of Labor in Spontaneous Evolution" (Johns Hopkins Hospital Bulletin, Vol. XXVI, No. 295, Sept., 1915); "Publotomy (Calif. State Journal of Medicine, Oct., 1918).

in most instances quite technical and will be omitted except insofar as they make for an intelligent understanding of the principle involved and its application in this particular group of toxemias.

Before classifying these procedures we might say that the etiology of eclampsia is unknown. Many theories have been advanced but we seem no nearer the solution today than twenty years ago. I wish to state briefly the pathology found in women dying from eclampsia. Schmorl, in 1893, described areas of degeneration and necrosis occurring around the portal vein in the liver. In advanced stages of the disease the process became general. These areas of necrosis are the result of thrombosis in the small vessels probably from agglutination of red blood cells. Since the report of Schmorl many observers have abundantly confirmed these findings and their presence, while not invariable, is pathognomonic.

The kidneys show degeneration and necrosis of the renal epithelium, particularly in the convoluted tubules. The extent of the lesions in the kidney is variable according to most pathologists and the tendency is to consider them secondary to the toxemia.

The brain is usually the seat of edema and thrombosis. Many of the small vessels contain thrombi and when the fatal termination is delayed, these vessels are surrounded by necrotic and degenerated brain tissue. A definite hyperemia has been described but is not universal. The heart shows myocardial changes in the majority of cases, Pollak reporting a 90 per cent involvement in autopsies analyzed by him.

Inasmuch then as the principal changes occur in the liver and kidneys, we expect some interference of function in these two organs. Great effort has been expended in trying to establish an index of their normal function. When this index is once established, the test is applied in various forms of disease to determine departure from the normal. This has been done in eclampsia and allied toxemias. But since the diagnosis of eclampsia as defined in this article offers little difficulty, and since the mortality is high, effort has been exerted chiefly in trying to determine the disturbance of function after symptoms occur but prior to the onset of convulsions. Tests should be applied during the pre-eclamptic stage, therefore, with the hope that characteristic changes in function will be found and that by the institution of prompt remedial measures the dreaded convulsions may be avoided. We shall describe these and comment on their value when used with the idea of diagnosing or controlling eclampsia (or nephritic toxemia).

Tests that have been used more recently in the effort to determine liver function have as the fundamental principle the ability of the liver to remove from the blood certain dyes which are introduced intravenously. Prominent among these are Rosenthal's phenoltetrachlorophthalein and bromsulphalein, and Delprat's rose-bengal tests. A definite amount of the dye is introduced intravenously and then samples of blood are taken at

intervals of a few minutes and analysis made to determine the percentage remaining in the blood. In the case of normal livers the dye is entirely removed after a few minutes. In damaged livers the dye remains much longer in the blood stream. Since the dye is in the bile efforts have been made to recover it quantitatively by use of the duodenal tube and use the amount put out in a given time as an index of function. But certain difficulties are encountered in the recovery of the entire bile output, so the time interval before its appearance has been found to be of greater importance in estimating liver function than quantitative recovery of the dye.

In addition to these tests others have been used. The indigo-carmin test is similar in principle. Lipase content of the blood has been studied by Whipple and has been found to be increased in certain cases with jaundice. Widal has used the milk ingestion test, and finally the liver has been subjected to strain by the administration of large doses of levulose in order to determine the sugar tolerance. These tests have little to recommend them in preference to the tests of Rosenthal and Delprat.

Several groups of tests have been used for the determination of kidney function. The ability of the kidney to excrete certain dyes when injected intramuscularly or intravenously is illustrated by the phenolsulphophthalein test brought out by Geraghty and Rowntree in 1910. Many observers have called attention to the fact that this test is not as reliable during pregnancy, however, as at other times.

A second group depends upon the ability of the kidney to function under strain. This group is represented by the giving of large doses of urea by mouth and the determination of the urea percentage in the blood stream after a definite period has elapsed.

We also have the water and concentration tests of Vollhard and Fahr in which the patient is denied water for several hours and then the concentrated urine is obtained and studied. The ratio between the concentration of metabolic products in the blood and the rate of excretion in the urine has been emphasized by Addis. His formula is:

$$\frac{\text{Urea in one hour's urine}}{\text{Urea in 100 cc. of blood}}$$

and the normal ratio in adult men was found to be 50.4.

Another group consists of the determination of changes in the amount of normal metabolic products and salts in the blood. Details of these tests will not be given as they may be found in any textbook of laboratory methods.

The examination of the urinary sediment with special reference to formed elements has stood us in good stead for years. The character of casts gives considerable information.

Lastly we must mention the urinary output. A marked decrease when the patient is on a fairly fixed intake is of considerable importance.

In addition to these functional tests, it might be of interest to say a word in regard to the blood



chemistry of these toxemias. This field has been thoroughly explored within the past decade and as is usual when deductions are drawn from new investigations, many conflicting conclusions have resulted. Some observers found that the uric acid content was much increased in eclampsia and immediately we felt that a test of important prognostic value had been suggested. Subsequent work has revealed, however, that the values for normal patients and for those with eclampsia approached one another so close that differentiation was not easy. And so with the other non-protein nitrogen compounds. Great stress has been put on the estimation of blood urea but the amount in the blood during severe toxemia may be normal. This is affected by diet and also by fluid intake and with our very toxic patients it is not possible easily to control these two factors. In a recent article Plass, after reviewing the literature and in the light of his own investigations, concludes that "chemical examination of the blood for non-protein nitrogen constituents is quite useless as an index of the severity of the pathologic changes in eclampsia and associated toxemias." While no pathognomonic findings have been reported we feel that there is some value in the negative findings; that is to say, normal readings for these constituents at least point to the absence of marked degenerative changes, and also to the possible recuperative ability of the organs involved.

A short summary, then, to show the findings in the blood chemistry of eclampsia is as follows:

Urea, creatinin, uric acid, blood sugar, catalase, normal; lipase, may be increased.

The investigation of the eye grounds in this group of toxemias has revealed abnormalities in a fairly large percentage of patients. In Christiana, 33 per cent of all eclamptics had eye symptoms. Hemorrhagic retinitis, according to Black, usually means a grave toxemia demanding prompt termination of the pregnancy. Mills of Los Angeles cautions that 90 per cent of all obstetrical patients show eye changes but most of these are due to physiologic enlargement of the pituitary gland. These changes consist in retinal venous stasis and contraction of the visual fields. J. W. Williams of Baltimore states that eye changes are usually the result of edema and toxemia and clear up after the pregnancy is terminated. Albuminuric retinitis is a complication of nephritis but not of pre-eclamptic toxemia.

It seems justifiable to conclude that when eye changes do occur, we are dealing with a more severe form of toxemia and in the presence of other positive findings, prompt termination of the pregnancy is indicated.

In 1904 Helme, acting on the assumption that there was increased intracranial pressure, did a lumbar puncture and found that the procedure seemed to relieve the convulsions. Kronig reported a similar experience. Spillman of Washington, D. C., reviews the literature and findings in seventy cases. In these there was a mortality of 27.6 per cent—higher than the average today. The procedure seems to add little and is very seldom employed at the present time.

Blood pressure readings should be made in every case, and are fairly accurate in the majority of instances as an index of the degree of toxemia. We have all seen grave toxemia or even convulsions where the blood pressure has not been very much elevated, but this is the exception. Ordinarily a rising blood pressure means an increasing toxemia. Many times a sudden elevation in an already high reading has been the deciding factor in the determination of both the time and the method of terminating the pregnancy. From personal observation I am inclined to attach major significance to the diastolic pressure. A rising diastolic seems more ominous than a rising systolic.

#### SUMMARY

1. There is no liver function test now available which is devoid of danger, easy of application, and at the same time reliable. The injection of dyes intramuscularly or intravenously is often accompanied by some resulting damage at the site of injection, occasionally by thrombosis and embolism. The taking of the blood samples in the Rosenthal test is difficult and not always accurate even in the hands of an expert technician. The duodenal tube method of demonstrating the initial appearance of the dye in the bile is not practical in this group of toxemias. At the present time the information derived from these procedures in liver function does not justify their employment.

2. Kidney function tests are better adapted for use in these toxemias. The readings, however, are not constant and the demonstration of lowered function is more apt to come in cases where some damage has been done to the vascular system in the kidney or in patients with pre-existing nephritis. Except in definite nephritis, positive findings come very late in the disease, usually at a time when simpler methods, such as study of the urinary sediment and routine examination of the urine, give us as accurate a picture. The tests we now employ may still be too crude to demonstrate finer changes in the involved organs. The value of these tests must not be overlooked, however. After the acute toxemia has subsided they give much valuable information as to the function of the organ, particularly with reference to permanent damage. This information is of great importance in the prognosis for future pregnancies.

3. Examination of the eye grounds should be made in all cases of acute toxemia. Positive findings such as retinitis, hemorrhage and choked disc impress on us the seriousness of the toxemia.

4. Blood chemistry may be omitted with the possible exception of the blood urea.

5. Blood pressure readings are important. A gradually increasing pressure, particularly diastolic, usually means an increasing toxemia.

#### BIBLIOGRAPHY

- Addis, T.: *Arch. Int. Med.*, 30:378.  
Berkley et al.: *Jour. Obs. and Gyn., Brit. Emp.*, 31:20.  
Black, N. M.: *Jour. A. M. A.*, 81:529.  
Deakin & Graham, *Surg., Gyn. and Obst.*, 36:348.

- Delprat: Arch. Int. Med., 32:401.  
 Denis & King: Am. J. Obs. and Gyn., 7:253.  
 Einhorn, Max: Jour. A. M. A., 1923, 81:1494.  
 Frontz & Geraghty: Jour. A. M. A., 79:1383.  
 Harris, J. W.: Bull. J. Hopkins Hosp., 1924, 35:103.  
 Kahn: N. Y. Med. Jour., 118:540.  
 Keith, N. M.: Am. Clin. Med., 1:61.  
 Killian & Sherwin: Am. J. Obst. and Gyn., 1921, 2:6.  
 King & Denis: Am. J. Obst. and Gyn., 7:409.  
 Krebs: Am. J. Obst. and Gyn., 7:89.  
 Longcope, W. T.: Bost. Med. and Surg. Jour., 1923, 189:273.  
 MacKenzie, Wallace: J. Obs. and Gyn., Brit. Emp., 1921, 28:3.  
 Major, R. H.: Jour. A. M. A., 81:1362.  
 Major, R. H.: Jour. A. M. A., 80:384.  
 Maurer & Gatewood: Jour. A. M. A., 84:935.  
 Mills: Am. J. Obs. and Gyn., 7:304.  
 Plass, E. D.: Jour. A. M. A., 82:266.  
 Rosenfield: Jour. A. M. A., 80:743.  
 Smith, J. A.: Am. J. Obst. and Gyn., 8:313.  
 Stroganoff: Lancet, 1924, 2:62.  
 Stroganoff: J. Obs. and Gyn., Brit Emp., 30:1.  
 Whipple, G. H.: J. Biol. Chem., 50:513.  
 Myers, V. C.: "Practical Chem. Analysis of Blood," 1921.  
 Williams, J. W.: "Obstetrics," 1923.

# DISCUSSION

M. H. Ross, M. D. (Pacific Mutual Building, Los Angeles)—Information of a positive nature concerning eclampsia, is most meager; therefore we welcome any assistance in its early diagnosis and preventive treatment.

Early diagnosis of premonitory signs and symptoms is best made by routine antepartum care during pregnancy and preventive treatment instituted as soon as the patient comes under observation.

To me the picture is of the nature of a kidney-liver bloc, resulting in absorption of toxic products, and a vaso motor disturbance with edema in various parts of the body, interfering with their normal functions; elimination being blocked a vicious circle is established and the organism is overwhelmed. I have seen the treatment swing from the veratrum viridi phlebotomy methods to the Stroganoff and Rotunda methods, to the early operative delivery and back again to conservatism, which proves that none was the "sine non quo."

On the other hand some cases show little or no improvement until the uterus is emptied. Sloane maternity shows a maternal mortality of less than 3 per cent and a foetal mortality of about 28 per cent. A follow-up showed albuminuria of some degree, in about 40 per cent of the cases, and increased arterial tension in about 37.6 per cent between one and two years after delivery, 54.2 per cent lessened excretory and kidney function. Thirty-one per cent showed persistent retinal changes, 41.4 per cent showed signs of cardio vascular renal disturbances. In subsequent pregnancies 50 per cent showed toxemia; and less than 50 per cent of these had living babies. Thus we see the formidability of our problem.

As to the laboratory tests, I am so in accord with the essayist, it makes it hard to discuss his paper, as it covers the literature so well.

The functional kidney and liver tests depending on the excretion of dye stuffs within certain time limits, are logically not correct in principle, for they are applied to an already damaged organ, and our toxic symptoms are already manifest. However, these tests may be of real value in checking up the extent of loss of function in these organs in the puerperium or later to determine the permanent damage, and early in pregnancy, to demonstrate the lowered kidney threshold of the sub-standard kidney.

Toxemia of any nature may be a cause for premature separation of the placenta, why not premature separation of the placenta with its concealed hemorrhage, and later absorption, a cause for eclampsia? If so, this brings up the question of its diagnosis.

Recently in a talk with John Barrow of Los Angeles, he spoke of this very thing in connection with some work he is doing on a liver function test, namely, the icterus index, which seems to give evidence of the liver's bili-

rubin forming function, and I would like to hear from him in this discussion.

Of the impractical tests at this time we may cite kidney functional tests, liver functional tests, by means of injected dyes; blood chemistry on fasting stomach for urea as findings and interpretations vary so.

Plass of Detroit, who, a few years ago laid great stress on the non-protein nitrogen constituents of the blood in toxic cases, now thinks the test useless as an index of the pathologic changes, but a negative finding points to the absence of marked degenerative changes. Of the practical methods I believe in:

Routine blood pressure readings and recording both systolic and diastolic; urinalyses of twenty-four-hour specimens, including microscopical and sediments; ophthalmologic examination for retinal changes, edema in toxemia, albuminuric retinitis in nephritis, a differential point, by the way; comparison of the fluid intake and output of urine in twenty-four-hour periods.

To these I might add: Routine weighing of patients to check up on the obese and the diet indicated; routine teeth and tonsil examination for focal infections; thyroid examination for endocrine disturbances of the unstable cardio-vascular type. These are all simple methods that can be carried out in every physician's office and will result in preventing much morbidity and mortality and also will do much to prevent that dreaded emergency eclampsia.

T. Addis, M. D. (Stanford Medical School, San Francisco)—I can only entirely agree with Doctor Stephenson in his emphasis on the importance of what is simple in laboratory procedures. If, in addition, they are of a quantitative nature, they gain immensely in practical significance. The evolution of blood pressure estimations is a good example. Now that we no longer have to depend on a qualitative judgment of pressure from palpation of the pulse but can obtain the blood pressure in mm. of Hg., the changes in systolic and especially, as Stephenson has found, in diastolic pressure, have become of primary importance in the practical management of the toxemia of late pregnancy. When our other laboratory methods become quantitative I believe we shall find that they, too, will greatly increase in value, and there is no reason why they should necessarily lose very much of their simplicity. The occasional occurrence of instances of grave toxemia in which the blood pressure changes are relatively slight, makes it highly desirable to have other quantitative measurements which vary with the degree of toxemia. There is already some evidence that counts of the number of casts and cells over measured periods of time may be much more useful than the usual qualitative reports.

J. M. SLEMONS, M. D. (819 Pacific Mutual Building, Los Angeles)—The sound conclusions reached by Doctor Stephenson would not be weakened if strong emphasis were placed upon the benefits of systematic personal conferences with obstetrical patients at reasonable intervals. This principle, to be sure, is not a new one; but its wide adoption by the profession is still awaited. In my judgment the value of conscientious supervision during pregnancy does not hold second place even to competent care at the time of labor.

After methods for blood analysis were devised, it was a source of disappointment to find that these refinements brought us no nearer to the cause of and rational treatment of eclampsia with its allied toxemias. We hoped to learn of variations in one or another of the ingredients of the blood that would prove a trustworthy therapeutic guide, or better to isolate a toxic material to which such complications might be ascribed. So simple a solution of the eclamptic problem, perhaps, would not have been anticipated had we remembered, as Stephenson points out, that the pathological anatomy involves a number of organs, ordinarily the kidneys, liver, lungs, heart, and central nervous system. In these circumstances it is to be wondered at in cases of pre-eclamptic toxemia that the wisest conclusions are not reached from laboratory tests alone, but from the information gained in that way, together with the clinical study of the patient herself?

FRANK W. LYNCH, M. D. (University of California Hospital, San Francisco)—Doctor Stephenson has re-



viewed carefully the laboratory methods advocated as aids in the diagnosis of the eclamptic group of toxemias. It is very refreshing to me to see that he places his chief reliance upon blood pressure readings, the simpler urinary analyses and the examination of the eye grounds, the latter of which should not at present be considered a laboratory method. Laboratory methods have been developed so tremendously the last few years and the advocates of various procedures have been often so enthusiastic as to their possibilities that one not thoroughly conversant with this field has been quite likely to have been bewildered at their meaning. For this reason, critical papers like Stephenson's have a very distinct value. It is useless to speculate as to what laboratory aids will be developed during the next few years which may prove of value in the early recognition of this group of toxemias of pregnancy. My personal experience in pathology and in the laboratory have made me rather doubtful that much can be expected from methods to determine liver function in this group of disease.

Nearly all who are conversant with the pathology of eclampsia have commented at one time or another upon the fact that the liver lesions, while pathognomonic of eclampsia throw a very small part of the liver out of function. The liver is such a tremendous gland that maintains its vitality in the face of almost insurmountable obstacles that it seems doubtful as to whether early toxemias could greatly disturb the balance of this gland. Occasionally, even when the disease is well marked, one may see at Caesareans a liver surface presenting no petechial hemorrhages or other visible pathology, a fact that I often noted at the time that I thought Caesarean was a justifiable method of treatment of the eclamptic state. Until the etiology of eclampsia becomes known, I agree with Stephenson that the practitioner had better place his reliance upon clinical observations greatly aided by the laboratory aids of blood pressure changes and a careful routine urinalysis and leave the evaluation of newer methods for the moment to the larger clinics where they will be studied with great caution.

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"... After the doctor had received him in his study and modestly attended to his long religious preface, with which he introduced his ignominious circumstances, and Dr. Hamey had assured him of his fidelity and gave him hopes of success in his affair, the generous soldier (for such he was) drew out of his pocket a bag of gold and offered it all at a lump to his physician. Dr. Hamey, surprised at so extraordinary a fee, modestly declined the acceptance of it. Upon which the great man, dipping his hand into the bag himself, grasped up as much of his coin as his fist could hold and generously put it into the doctor's coat pocket, and so took his leave. Dr. Hamey returned into his parlour to dinner, which had waited for him all the time, and smiling (whilst his lady was discomposed at his absencing so long), emptied his pocket into her lap. This soon altered the features of her countenance, who telling the money over, found it to be thirty-six broad pieces of gold: at which she being greatly surprised, confessed to the doctor that this was surely the most providential fee he ever received; and declared to him that, during the height of his severe illness, she had paid away (unknown to him) on a state levy towards a public supply, the like sum in number and value of pieces of gold; lest under the lowliness of his spirits, it should have proved a matter of vexation, unequal to his strength at that time to bear; which being thus so remarkably reimbursed to him by Providence, it was the properest juncture she could lay hold on to let him into the truth of it."—From "The Gold-Headed Cane."

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"In consultations there is, of course, much scope for diversity of opinion, but in the whole range of the plausible reasoning which the conjectural science of medicine admits of there is nothing so imposing as a case; it bears down all before it. One of the consulting doctors, after hearing the history of the previous treatment, advances that he has seen a case similar to the one now under consideration, in which he did so and so with manifest advantage; the argument is irresistible."—"The Gold-Headed Cane."

## INTESTINAL OBSTRUCTION

### A STUDY OF NINETY-THREE PATIENTS OPERATED UPON IN THE SAN FRANCISCO EMERGENCY HOSPITAL SERVICE

By EDMUND BUTLER \* AND G. D. DELPRAT \*

*There always is the possibility that the next patient any doctor sees may have intestinal obstruction. Therefore, it behooves all of us to read this clear and forceful summary of the present methods of managing these patients by those in a position to see them in numbers. Every physician will be the better prepared to meet his responsibilities and possibly avoid later regrets by reading this essay by Butler and Delprat and its valuable discussion by several other surgeons.—Editor.*

DISCUSSION by Alanson Weeks, San Francisco; C. D. Collins, Fresno; A. E. Anderson, Fresno; Stanley Stillman, San Francisco; F. R. Fairchild, Woodland.

THE early diagnosis of intestinal obstruction is missed not because we are unfamiliar with the condition, but because we fail to take adequate histories and fail to draw the proper deductions from our findings.

It is excusable to make a diagnosis of an acute intra-abdominal crisis and operate immediately, finding a bowel obstruction, but making a diagnosis of enteritis, intestinal influenza, gastritis, vascular crises, or some other condition that will permit of non-intervention, is certainly inexcusable.

Bowel obstruction, due to strangulated hernia, is operated on early universally, but patients with obstructions from less obvious causes are frequently allowed to develop protracted vomiting and an extreme degree of toxemia before intervention is considered.

Our series comprises ninety-three patients with bowel obstructions upon whom operation was performed with a mortality of 34.4 per cent.

There were thirty-four inguinal hernias with obstruction, all were operated on within the first thirty-two hours. Four umbilical hernias and four ventral post-operative hernias were encountered, all strangulated. Nine femoral hernias were operated on; all contained portions of the ileum.

There were seventeen obstructions due to abdominal adhesions. Ten of this group were due to post-operative adhesions; one was caused by adhesions to the tip of Meckel's diverticulum; two were due to adhesions resulting from acute inflammation of the pelvic organs, and two were due to adhesions about the terminal ileum and cecum. In this group, the post-operative diagnosis was at great variance with the pre-operative diagnosis. Five were diagnosed as conditions other than bowel obstructions—one perforated gastric ulcer, two appendicitis, one acute intra-abdominal inflammation, and one strangulated hernia. Three obstructions were due to volvulus, one involved the small bowel, and two involved the sigmoid.

Carcinoma accounted for eleven—two of the

\* Edmund Butler (Medico-Dental Building, 490 Post Street, San Francisco). M. D. Cooper Medical College, 1911. Practice limited to Surgery. Hospital connections: San Francisco Emergency, Stanford and St. Mary's Hospitals. Appointments: Assistant Clinical Professor of Surgery, Stanford.

\* G. D. Delprat (2633 Piedmont Avenue, Berkeley). M. D. University of California, 1922. Hospital connections: Resident Surgeon, San Francisco Hospital.

CHART 1

DIAGNOSIS	Average Poly Count	Duration of Hernia	Average Time Fol. Oper.	Average Duration Acute Sym.	Average Dur. Acute Sym. c Death	Diagnosis Pre-Oper.	Deaths
Hernia Inguinal .....	11,000	13 + yrs.	.....	32 hrs.	96 hrs.	Int. Obs.	3
Hernia Umbilical .....	14,500	10 + yrs.	.....	23 hrs.	25 hrs.	Int. Obs.	1
Hernia Vent. Post. Op.....	14,000	.....	3.5 yrs.	20 hrs.	25 hrs.	Int. Obs.	1
Hernia Femoral .....	13,500	14 + yrs.	.....	48 hrs.	80 hrs.	Int. Obs.	3
Adhesions Abd. ....	14,400	.....	7.3 yrs.	92 hrs.	80 hrs.	Int. Obs. 12 ? 5	7
Hernia Internal .....	19,000	.....	.....	48 hrs. 120 hrs.	120 hrs.	Int. Obs.	1
Volvulus .....	28,000	.....	.....	28 hrs. 34 hrs. 96 hrs.	34 hrs. 96 hrs.	Int. Obs.	2
Carcinoma .....	13,100	.....	.....	102 hrs.	48 hrs.	Int. Obs. 10 ? 1	8
Undetermined .....	19,500	.....	.....	63 hrs.	57 hrs.	Int. Obs.	5
Intussusception .....	16,900	.....	.....	24 hrs.	24 hrs.	Int. Obs.	1
Ilium Syphilis .....	10,400	.....	.....	12 hrs.	.....	Int. Obs.	.....
Peritonitis Prolif. ....	18,000	.....	.....	24 hrs.	.....	Appendix	.....

pylorus, one of the jejunum, three of the cecum, two of the descending colon, two of the sigmoid, and one of the rectum. Six enterostomies alone were performed in this group; one patient recovered. Resection of the cecum, followed by immediate anastomosis, was done on two patients; one recovered. Two patients had resections of the pylorus, followed by anastomosis; one recovered. On one patient gastro-enterostomy for carcinoma of the small bowel was followed by death.

In six obstructions we were unable to determine the cause, because the patients came into the hospital in extremis and enterostomy alone was performed. The one patient that recovered was probably a diverticulitis in the region of the rectum.

A patient with chronic proliferate peritonitis obstructing the terminal ileum recovered following the removal of the thickened peritoneum and the straightening out of the kinked ileum.

Patients with syphilitic ulcers and resulting constricting scars of the ileum producing obstruction, recovered following resection of the involved loop of ileum.

There was only one patient with intussusception, which had existed for approximately twenty-four hours, who died following reduction of an apparently viable intestine.

Charts 1 and 2 give the age, sex, duration of hernias, as well as the time between the development of acute symptoms and operation. In all the patients diagnosed bowel obstruction previous to operation, pain and vomiting were the symptoms that stood out most prominently. Very often the absence of distention was misleading, as a marked dilatation of small bowel was present without any noticeable abdominal distention. Peristalsis was unreliable as a symptom. It is present early, but if toxemia is great, the bowel is paralyzed, and any movement will be sluggish and not heard with the stethoscope. The non-protein nitrogen content of the blood is valuable as a prognostic datum, but is of no value in diagnosis; patients showing 50 mg. per 100 cc. of blood seldom recover.

The exact cause of the toxemia has not as yet been definitely established, but we definitely know that the small bowel contains very toxic material, the absorption of which produces symptoms and

signs similar to that of shock, and that the only relief is early release of the obstruction, followed by the proper post-operative treatment.

Treatment as carried out in our service is as follows:

One thousand cc. glucose solution, 10 per cent is given intravenously, very, very slowly if the patient is toxic and dehydrated. Hypodermoclysis, Weeks' drip, and stomach lavage, are employed if for any reason the operation is delayed. The field of operation is dry shaved, scrubbed with ether and alcohol, and painted with a 5 per cent alcoholic solution of picric acid. Ether anesthesia is used where the cause of obstruction is undetermined; for example, internal hernias, volvulus or bands of adhesions. Gas and oxygen or local anesthesia is used where strangulated hernias produce obstruction. Enterostomies were mostly done under local anesthesia. Normal salt solution is given subcutaneously in the axillae or deep into the muscles of the thighs during operation if the operating surgeon deems it necessary. If the cause of the obstruction is not evident, immediately upon opening the peritoneum the hand is introduced, no dilated intestine being allowed to escape, and a systematic search is made for the seat of obstruction. Any band of adhesions, volvulus, thickened bowel, tumors, or fixed bowel, is as a rule immediately palpated, and further steps in the operative procedure may be quickly mapped out. This procedure very often does away with the unneces-

CHART 2

DIAGNOSIS	No.	Male	Female	Right	Left	Average Age	Mortality Per Cent
Hernia Inguinal .....	34	34	.....	22	12	52 + yrs.	8.8
Hernia Umbilical .....	4	1	3	.....	.....	55 + yrs.	25.0
Hernia Vent. Post. Op. ....	4	3	1	.....	.....	33 + yrs.	25.0
Hernia Femoral .....	9	2	7	4	5	53 + yrs.	33.3
Adhesions Abdom. ....	17	6	11	.....	.....	38.9 + yrs.	41.0
Hernia Internal .....	2	1	1	.....	.....	54 + yrs.	50.0
Volvulus .....	3	1	2	.....	.....	46 + yrs.	66.6
Carcinoma .....	11	6	5	.....	.....	59 + yrs.	72.0
Undetermined .....	6	5	1	.....	.....	61 + yrs.	83.0
Intussusception .....	1	.....	1	.....	.....	1.5 + yrs.	100.0
Ilium Syphilis .....	1	.....	1	.....	.....	32 + yrs.	0.0
Peritonitis Prolif. ....	1	.....	1	.....	.....	18 + yrs.	0.0
	93	59	34	26	17	.....	34+



sary handling of loops of distended bowel in a visual search for the cause of the obstruction.

There are many hints that are familiar to most of us who see many of these cases; for instance, the character of the peritoneum transudate; if clear, denoting moderate interference with circulation, and if bloody denoting strangulation; if bloody with offensive odor, denoting strangulation with beginning gangrene.

Following up collapsed bowel often leads quickly to the source of obstruction. Having located the obstruction and performed the necessary operation for relief, the question of enterostomy comes up. It is our belief that enterostomy in the first loop of jejunum, and immediately above the obstruction if there is any damage to the muscular wall, always should be performed, particularly if there has been any great amount of vomiting.

We have all had the experience of loosening a band of adhesions when the distention has not been great and no gross injury of the bowel is observed, yet the patient slowly dies from an apparent paralytic ileus. This type of case has led us to do enterostomies in practically all obstructions if the toxemia is marked. Technique for the enterostomy is as follows:

The distended bowel is stripped distally and proximally to rid the lumen of gas and foul liquid contents. The return of material is prevented by the assistant holding the bowel between index finger and thumb, or the application of a rubber-protected intestinal clamp applied very loosely (Figs. 3 and 4). Stretch a triangular area of the intestine by means of Allis clamps, surround an area about the size of a nickel with a purse-string suture. Each stitch should include the submucosa. Make a small hole with a knife in the center of the enclosure, just large enough to admit a 16 or 18 rubber catheter, this catheter having several holes made along its wall and with the end cut off squarely. The lateral openings minimize the possibility of blocking. Push the catheter into the lumen well past the lateral openings. Tie the purse-string suture with a surgeon's knot snugly about the catheter; at a distance of about 6 mm. from the first purse-string suture put in another (Fig. 5). Aspirate the gas and liquid contents through the catheter. Drop the gut into the peritoneal cavity, being sure it is not kinked at the point of entrance of the catheter. Lay the omentum around the catheter between the parietal peritoneum and the entrance into the intestine. Bring the catheter out through the upper angle of the wound or through a stab wound, as judgment dictates.

Every two hours the nurse is instructed to flush the catheter with normal salt solution, and oftener if the tube becomes plugged. The catheter is connected with a bottle hanging on the side of the bed, and the quantity of fluid that will be drained from the upper jejunum in the first twenty-four hours is great. If the drainage is continuous, the toxic condition of the patient rapidly improves and there is seldom vomiting. Tissue fluids are supplied intravenously, if necessary, otherwise by subcutaneous and intramuscular therapy.

Weeks' drip three hours on, one hour off, is

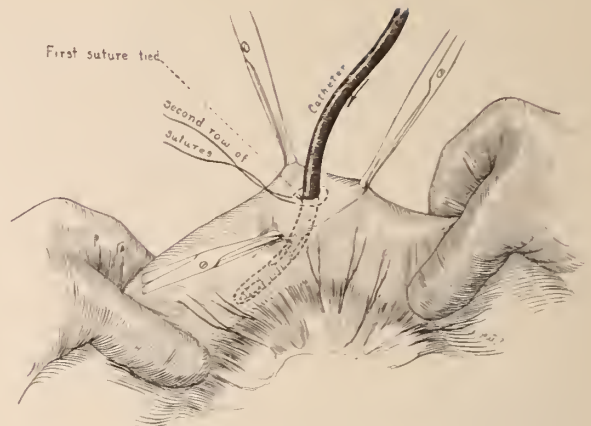


Illustration III. First row sutures tied and second row in place.

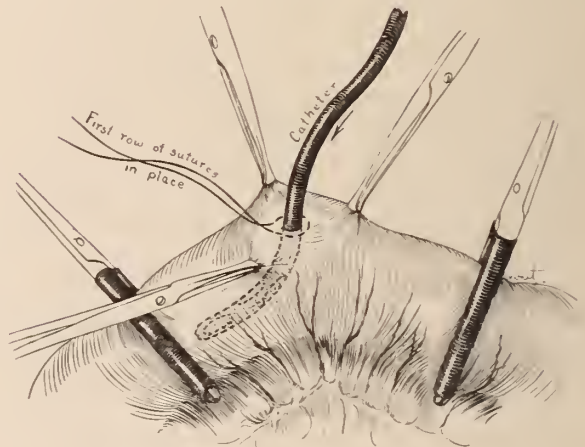


Illustration IV. First row of sutures in place.

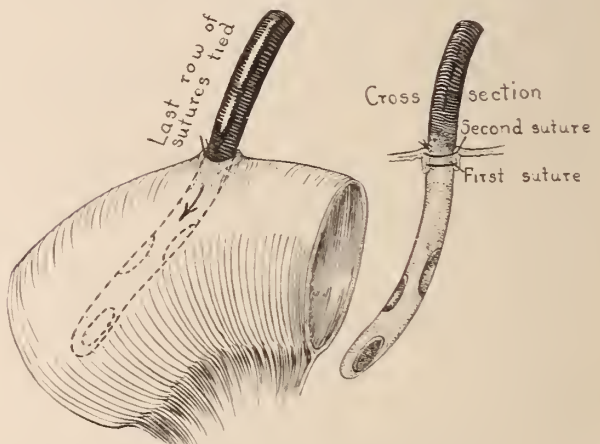


Illustration V. Operation completed.

started immediately upon the patient's return to the ward. In the first fluid that enters the rectum is included 2 drams of tincture digitalis. Hot compresses to the abdomen, we believe, are comforting and promote early peristalsis. We never give pituitrin until peristalsis has been initiated. Morphine sulphate must not be withheld, the patient must be kept comfortable. The enterostomy tube is removed as soon as peristalsis is active and movement of the bowels has taken place.

We have never had any disturbance from the

fistula following the removal of the enterostomy tube.

#### DISCUSSION

ALANSON WEEKS, M. D. (384 Post Street, San Francisco)—Doctors Butler and Delprat have covered their subject exceedingly well. I would like to have had them even more decided in the differential diagnosis and insistence on early surgery for intestinal obstruction.

Sudden pain out of a clear sky, usually becoming periodic and grinding in character with no increase in temperature or other signs of spreading peritonitis which would cause the usual persistent vomiting of obstruction, calls for quick and certain decisions. It is seldom necessary or of value to bedevil the patient with x-ray examinations or other unnecessary time-killers. Most of us who have seen many of these patients have very few regrets because we opened the abdomen early, the opposite is a sad story.

C. D. COLLINS, M. D. (Mattei Building, Fresno, California)—This splendid paper by Butler and Delprat brings to mind two points that I would emphasize in the consideration of the subject of acute bowel obstruction.

One: We have made considerable progress in the surgical treatment of this condition in the last few years. We have learned that, except in very early cases, removing the source of obstruction is not sufficient to save the life of the patient. It is very essential to remove as much as possible of the toxic material from the occluded bowel and provide external drainage to control further absorption. The method described in the paper is simple and effective.

Two: That in spite of increased knowledge and skill in the surgical treatment of acute obstruction, the present high rate of mortality can not be materially reduced until the physicians have learned the danger of procrastination in dealing with these conditions, and have acquired the courage to insist upon early surgical treatment. The patient in the earlier stages of bowel obstruction usually has the feeling that his bowels are going to move in a short time and it is often a difficult matter to convince him otherwise. It is our job to assume the responsibility and convince him otherwise. We have been able to educate both ourselves and the public to diagnose and treat appendicitis in its curative stage. The same teaching must be applied if we are to be reasonably successful in treating patients suffering from acute bowel obstruction.

A. E. ANDERSON, M. D. (Mattei Building, Fresno, California)—As recently as February, 1924, Sir William Taylor of Dublin, in an editorial in *Surgery, Gynecology and Obstetrics*, spoke of the toxæmia of intestinal obstruction as an acidosis and advised the administration of sodium bicarbonate. The experiments of McCallum in 1920 and the work of Haden and Orr of the University of Kansas School of Medicine, reported in the *Journal A. M. A.*, May 10, 1924, prove that in this toxæmia there is an invariable tendency toward alkalosis. Hence, there should be no administration of alkalis.

Blood chemistry has shown a marked fall in the plasma chlorids, and the administration of sodium chlorid in large doses is decidedly valuable in the toxæmia of intestinal obstruction as shown by Haden and Orr.

Blood chemistry may also be of some value in the differential diagnosis by showing early the characteristic changes in the blood caused by this toxæmia, viz: high non-protein nitrogen, low plasma chlorids and a rise in the carbon dioxide combining power of the plasma.

It is possible that the liberal use of sodium chlorid may prove ample to combat the toxæmia of early cases in which the cause of the obstruction can be readily removed and enable us to dispense with jejunostomy as a routine measure. In advanced cases the enterostomy is, of course, indispensable.

The mortality from intestinal obstruction is variously estimated at from 30 to 50 per cent. By early diagnosis and prompt surgery we could probably reduce this mortality to from 2 to 5 per cent. As for other abdominal surgery, Doctors Butler and Delprat state that cases of bowel obstruction, due to strangulated hernia, are always operated early, but patients with obstruction from less obvious causes are often permitted to develop an extreme

degree of toxæmia before intervention is considered. It seems evident that the physician who first sees these patients hesitates to make a diagnosis of intestinal obstruction in the presence of symptoms that must be suggestive of that condition. We must sell the idea to the physician that even at the risk of an occasional unnecessary laparotomy, these patients must be operated upon during the first twenty-four hours or earlier, if we are going to reduce this diseased mortality, which is a constantly recurring reproach to all of us.

STANLEY STILLMAN, M. D. (Stanford Hospital, San Francisco)—Doctors Butler and Delprat have had exceptional opportunities for the observation and treatment of acute obstruction, and acute termination of chronic obstruction of the bowels, and their conclusions and methods of treatment are entitled to consideration and respect, and their results are gratifying. Their method of draining the involved bowel is to be commended for its simplicity and rapidity of performance and avoidance of manipulation of the damaged and distended bowel.

Their discussion of the diagnosis of obstruction, however, is based on acute cases seen in emergency hospital service and their strictures on the general profession, perhaps not quite just—many patients have practically no symptoms, except failure to secure a bowel movement, and it is sometimes almost as difficult to convince one's self as to convince the patient that the abdomen must be opened, till several days have passed and symptoms develop that convince the patient that the time has come to do something, and the physician that the time has passed.

Then too, personally, I have bitter recollections of patients recovering spontaneously after I have convinced myself and all their relatives that they were doomed to certain death if they did not permit their belly to be opened. Nevertheless, I firmly believe and teach that everybody else's patients should be immediately operated upon when there is a well-grounded suspicion that an obstruction exists—and not wait for or expect the classical symptoms of acute obstruction. When these are present the patients quickly find their way to the emergency services and then is the time when Doctors Butler and Delprat's observations begin.

FRED R. FAIRCHILD, M. D. (Woodland Clinic, Woodland, California)—The practical experience in handling ninety-three cases of bowel obstruction as reported by Butler and Delprat affords data of very great practical value.

The insistence on early diagnosis and prompt surgical relief is fundamental. To spend hours in investigation to be sure of a diagnosis, if obstruction does exist, is often fatal.

The point of the paper which the doctors wish specially to emphasize is the necessity of drainage after the obstruction has been relieved. This they accomplish by enterostomy, the technique used by them being altogether satisfactory. In this we concur, but at the Woodland Clinic we have gone a step further. It has been our experience in the past that not always is drainage, as accomplished by the technique suggested, sufficiently rapid or complete if the patient is already extremely toxic. Our procedure is to select a portion in the distended bowel at about midway between the beginning and termination of the distension. A purse-string suture is used exactly as they suggest. The bowel is caught up between the fingers of the assistant in such manner as to prevent leakage. A specially constructed suction tube about fourteen inches long is inserted through a nick in the bowel, negative pressure being in the tube at the time of its insertion. The assistant continuously, by gauze and finger pressure, prevents leakage about the point of perforation and the operator threads loop after loop of the distended bowel over the suction tube as the bowel gradually collapses.

With an experienced assistant it is quite possible to completely collapse the distended bowel, removing all gas and toxic material within the space of five minutes. Through the suction tube, after the bowel has been collapsed, about two ounces of warm castor oil is instilled into the lumen of the bowel. An enterostomy catheter then replaces the tube and the subsequent procedure is



as recommended by the gentlemen whose paper we are discussing.

It is our feeling that the advantage gained by the immediate relief of a large amount of toxic material far outweighs any danger of peritoneal contamination during the procedure, providing the assistant knows the technique of collapsing the bowel.

The Poole's suction tube is not satisfactory for the procedure in that the fenestra are so small that fecal particles obstruct. The tube we use has three large fenestra at the distal extremity, which fenestra are protected by a wire loop placed about one-eighth of an inch away. These fenestra are large enough so that fecal particles are aspirated without obstruction.

## PROGRESS OF TREATMENT FOR HYPERTROPHIC STENOSIS OF THE PYLORUS

By BURNS CHAFFEE \*

*One editorial councilor, himself a good surgeon, writes in his confidential evaluation of this discourse, "It not only is an excellent statement of existing knowledge about the important problem of pyloric stenosis, but it adds to that knowledge, and the author's message is exquisitely delivered."*

*Another editorial councilor—a pediatrician—writes that "the careful reading of the paper taught me something and I believe the paper, including the discussion, contains an important message for every doctor."—Editor.*

Discussion by Cleon C. Mason, Long Beach; Alanson Weeks, San Francisco; Guy Cochran, Los Angeles; William M. Happ, Los Angeles.

**H**YPERTROPHIC STENOSIS of the pylorus was described first by Hezekiah Beardsley (1718) under the title of "Scirrhus of the Pylorus in an Infant." Williamson reported a case, published by Dawosky (1842), entitled, "Observations on the Hypertrophy of the Submucous Tissue of the Pylorus in an Infant Aged Six Weeks." However, little scientific interest was displayed before Hirschsprungs' contributions in 1888, in which he reported two specimens in the new-born. In his descriptions, "The tumors were hard muscle masses with lumens 3 to 5 mm. The approach of the pyloric antrum was funnel shape, the walls more or less hypertrophic." Since then this disease has taken its place as an important one of infancy.

In 1897, Thompson of Edinborough, was able to collect fifteen cases, and the following year Cautley found but twenty cases, including two of his own. In 1902, he states that more than fifty cases had been recorded, in nineteen of which operations had been performed.

Nicoll (1904), said: "These cases when first seen fall in the matter of treatment into two groups, those in which exhaustion and emaciation are so pronounced that immediate operation offers the one chance of saving life, and those in which the stenosis is probably partial, and in which the question of operative interference may be postponed, and the child treated by dieting and rectal feedings; there is, of course, always an element of doubt in the diagnosis in the latter case." Nicoll operated upon the first patient in Scotland (1889), doing a modi-

fied Loreta's operation. This case has been referred to frequently as the first successful operation. However, M. Abel preceded him a few months, performing successfully a gastroenterostomy. Writing in 1904, Nicoll states he had seen fourteen cases since his first operation, in nine of which he had operated, losing three. He usually opened the stomach on the anterior wall and divulsed the pylorus, as he states: "To burst up the thickened pyloric ring by forcible over-stretching from within, as one does an obstinate urethral stricture; then decide the further course of operation by the infant's general condition." Because of the high mortality the Loreta divulsion soon lost all the popularity it had accrued and gastroenterostomy assumed the leading role in surgical procedure.

Dent (1902), introduced the Heinicke-Mikulicz operation. It proved inappropriate for true hypertrophic stenosis, and was soon dropped. Later Nicoll devised a partial pyloroplasty in which the mucous membrane was not cut. He observed that the mucosa was normal, that the pathological condition was in the muscle. He made a v-shaped incision perpendicular to the long axis of the pylorus, through the muscle down to the mucosa and converted it into a y, thus enlarging the circumference of the pylorus. In addition, he made an opening in the stomach wall through which he dilated the canal according to the Loreta procedure. This operation required considerable manipulation and never gained much popularity. As the mortality for gastroenterostomy in the hands of the skilled surgeons continued to be discouragingly high, further pyloroplastic operations were attempted.

Fredet and Dufour (1908), also Weber, in December of the same year, incised longitudinally the pylorus through the muscle, down to, but not opening the mucosa, and brought the ends of the incision together. The great contribution to surgery by these three men robbed the surgical intervention for hypertrophic stenosis of its high mortality, by removing the danger of infection and the lessening of manipulation to the stomach and the intestine. Rammstedt (1911), incised the pylorus according to Fredet's method, but was unable to bring the ends of the incision together on account of the sutures cutting through the tissue, and he fastened the omentum over the incised pylorus. In 1912 he operated, incising the muscle, leaving the mucous membrane exposed. Both babies recovered. The simplicity of the operation and the gratifying results have popularized surgical intervention for true hypertrophic stenosis of the pylorus in infants.

Strauss (1912 and 1913), devised experimentally, a pyloroplasty which he has employed with brilliant results. He reports 101 operations with three deaths. He does a minimum disturbing of the abdominal viscera and delivers the pylorus without handling any other portion of the stomach. He lays stress on the importance of the flap of the hypertrophied muscle which he sutures over the exposed mucous membrane. The importance of this muscle flap is questionable, inasmuch as careful studies of pathological specimens have shown that the mucosa needs no protection. However, the operation has emphasized two important steps in the Rammstedt

\* Chaffee, Burns S. (917 Security Building, Long Beach, California). M. D. Johns Hopkins, 1912. Other degrees: A. B. Stanford University, 1908. Graduate study: Union Memorial Hospital, Baltimore, four years; Sarbonne University, March 1 to July 1, 1919. Previous honors: Captain Medical Corps, U. S. Army, two years. Practice limited to surgery since 1916. Hospital connections: Seaside Hospital, Long Beach.

operation: First, minimum handling of the abdominal viscera; and second, blunt dissection in the freeing of the muscle fibers over the mucosa, allowing the latter to partially unfold. These two steps, in the opinion of the writer, explains the low mortality in the above series.

Martha Wollstein, in her paper entitled, "Healing of Hypertrophic Pyloric Stenosis After the Fredet-Rammstedt Operation," states: "It has been shown that the lesion in the hypertrophic pyloric stenosis is a hyperplasia of the unstriated muscle cells of the circular coat, while the connective tissue is not increased. After the Fredet-Rammstedt operation, healing is brought about by the cells of the serosa and the submucosa, but the unstriated muscle cells take no part in the process.

"The wound in the pylorus is healed within nine days. The pylorus has become relaxed within two weeks. The stomach has returned to its normal size within a month and the gap between the cut ends of the muscle coats has practically disappeared in six weeks. In two years only a thin line of connective tissue fibers separate these two muscle ends, and the stomach is quite normal."

The handling of surgical cases requires co-operation of the pediatrician with the surgeon in obtaining the best results. The diagnosis, pre-operative preparation and post-operative care, requires the skill of a well-trained pediatrician.

Reports from different writers give the frequency of hypertrophic stenosis of the pylorus in infants from  $\frac{1}{3}$  of 1 per cent to 2 per cent. The diagnosis is generally considered not difficult. The usual history is of vomiting, beginning two to six weeks after birth, which gradually increases in amount and force until it is projectile in type. The loss of weight, the characteristic funnel-shaped abdomen, the presence of peristaltic waves passing from left to right over the epigastrium, especially noted following the intaking of fluid into the stomach, and the presence of a definite mass in the epigastrium usually just to the right of the mid-line, although sometimes up under the edge of the liver and felt at end of inspiration, make the diagnosis certain. We place little importance on the character of the stools and x-ray findings. Stools are an index as to the amount of food the infant gets, but are unreliable. Not infrequently severe cases of pylorospasm show as much retention as true hypertrophic stenosis on x-ray examination. Active visible peristalsis is valuable, but the presence of a palpable tumor is of primary importance. In a series of nine cases which the writer operated on, seven had a palpable tumor. At operation the other two had no tumor and probably would have recovered under the care of a competent pediatrician; however, a Rammstedt was done and they made an uneventful recovery. In all cases in which a palpable tumor is present we feel that surgical intervention should be instituted at the earliest possible hour. Early operation lessens the mortality, shortens by weeks the treatment, and in the end restores a normal pylorus.

In the cases of extreme dehydration we generally give, intra-peritoneally, 100 cc. to 150 cc. normal saline, eight to ten hours before operation. In all

cases water is given ad lib, and feedings are continued up to four hours before operation. We never do a gastric lavage, for the attendant risks always seem greater than the benefit to be derived.

During the operation every precaution is taken to keep the infant warm; an electric pad placed under a thickness of blanket furnishes an even temperature and is easily regulated. Ether is our anesthetic of choice, and we have found that little is required for the average baby. In closing the abdomen we usually leave 150 cc. to 200 cc. normal salt solution in the abdominal cavity. This is introduced through a small tube left in the lower angle of the incision while the wound is being closed. Following the introduction of the normal saline the tube is removed, dressings are applied, and the infant is returned to his crib. Six hours after operation feedings are started, and mothers' milk, if available—if not, formula is given every two hours in dram amounts, increasing rapidly to two ounces every two hours. The regular four-hour schedule is returned to as soon as possible, providing no vomiting occurs. Post-operative feeding is primarily a pediatrical problem.

I have operated on nine infants, eight boys and one girl. Of the nine, seven had hypertrophic stenosis of the pylorus; all are first baby boys. A definite tumor was felt before operation. In the two patients in whom no tumor was felt, none was found at operation; however, a Rammstedt operation was done and both babies made an uneventful recovery. The youngest baby in the series was two weeks old and the oldest eleven weeks old. The average age was six weeks. The average duration in the hospital was seven days. There were no fatalities.

Although cases of hypertrophic stenosis of the pylorus do get well without an operation, the great majority do not. Furthermore, it is much more economical to operate.

#### DISCUSSION

CLEON C. MASON, M.D. (219 East Tenth Street, Long Beach)—It has been refreshing to read a paper on a medical subject in which the author has seen fit to depart from the stereotyped form in which such papers are generally offered. One reads Dr. Chaffee's paper and feels that medicine is a growth with gradual improvement year after year. The one important point brought out, the one fact that should be written in bold-faced type so that all can read it, is this: Once a diagnosis is made of hypertrophic pyloric stenosis, then is the time to operate. An occasional patient can be carried along and finally an adjustment may take place, but the time involved, the labor expended, the worry and care necessary, to say nothing of the economic loss entailed in prolonged expectant medical treatment, are far out of proportion to the results obtained. A patient, at the beginning a good surgical risk, too often thus becomes a poor risk with an excessive mortality rate. The mortality rate among babies with pyloric stenosis could well be taken as an index of the quality of pediatric practices in any community.

ALANSON WEEKS, M.D. (384 Post Street, San Francisco)—Doctor Chaffee has covered his subject thoroughly. I would again like to insist that the diagnosis of congenital pyloric stenosis can, and should be, made without the use of the x-ray, or feeling of the tumor. Especially would I urge that if the tumor cannot be felt



it should make no difference in the diagnosis warranted by other classical symptoms.

I have learned to know that it is very stupid to ever make a dogmatic statement in regard to pathological conditions of the human body. This has been brought home to me in connection with the disease of which we are speaking. I started a paper which I wrote about eight years ago with the remark that "all babies with congenital pyloric stenosis should be operated upon immediately." But in the last five years I am equally certain that more than half of them can, and have been cured by the proper use of thick feedings and atropin. This last fact, however, must not be allowed to encourage the unpracticed to resort to surgery altogether too late.

GUY COCHRAN, M.D. (1136 West Sixth Street, Los Angeles)—Doctor Chaffee has given us an excellent paper on this most interesting and important condition.

I feel, as Doctor Weeks does, that the x-ray is almost never indicated in these cases, nor is it imperative that a tumor be felt, for we have found several in which the pylorus lies high up under the liver or so deep in the abdomen that a tumor could not have been felt.

I regard pyloric stenosis as a medical condition which usually becomes surgical, so every patient is studied by both the pediatrician and surgeon. The majority of babies with this tumor, when first seen, have been allowed to advance so far that they are immediately surgical. The minority are treated medically.

When the infant continues to vomit or has lost 20 per cent of its body weight, or when dehydration is increasing, it is operated upon without further delay. We consider that all who have lost over 20 per cent of body weight, or in whom dehydration is marked, are bad surgical risks.

I follow the Fredet-Rammstedt technic pretty closely. The pylorus is brought into the wound with a rubber covered, blunt hook so that the stomach is not handled at any time. An incision is made into the serosa the entire length of the tumor. This is then spread by blunt dissection with a mosquito clamp. The mucosa is entirely exposed but no attempt is made to cover it. These babies are kept warm on the table, they are given fluids before and after the operation to the greatest extent possible.

WILLIAM M. HAPP, M.D. (523 West Sixth Street, Los Angeles)—Doctor Chaffee's paper and the discussion is very timely as this condition is one where close co-operation between surgeon and pediatrician may save many human lives.

The diagnosis of hypertrophic stenosis from pylorospasm is often very difficult. The latter condition is fairly common in young infants, usually responds to large doses of atropin and thick cereal feeding, and does not require operation.

The presence of a palpable tumor is very diagnostic of hypertrophy, but its absence does not eliminate the diagnosis.

It is not always necessary to operate as soon as the diagnosis is made. If the infant be in good nutrition and can be observed very closely, many of the milder cases recover under proper medical treatment. By this is meant close observation of weight, condition and stools, thick cereal feeding, re-feeding if vomiting occurs, occasional gastric lavage, atropin, and ample fluids. The patients who do best under this treatment are those in whom the spasm is more marked than the obstruction. If a short period of this regime does not cause improvement operation should be performed. Operation should not be delayed if the condition of the patient is not good, or if the patient cannot be closely observed.

Pre-operative and post-operative care is important. The stomach should be emptied before operation and fluids given. Salt solution always should be left in the peritoneal cavity at operation. Feeding should be begun very early after operation and ample fluid given by injection. Post-operative vomiting is no contra-indication to feeding.

If patients are placed under observation early when their condition is good, there should be a very low mortality. Mortality is due chiefly to failure of early diagnosis, permitting poor condition of the infant when first placed under treatment.

## RADIATION TREATMENT OF SUPERFICIAL MALIGNANCIES

By ALBERT SOILAND \* AND WM. E. COSTOLOW \*

*The chemical "paste" method of treating skin cancer has been discarded by practically all leading dermatologists and radiologists.*

*Thorough treatment of precancerous lesions is of prime importance.*

*Brass filtered radium is the preferable therapeutic agent in thick indurated skin epitheliomata.*

*Use of the cautery or electro-coagulation preceding radiation is unnecessary but after radiation may be of value in extensive sloughing skin lesions.*

*Malignancies of eyelids, nose and lip should be treated with radium exclusively.*

*Radium is practically a specific in treatment of the local lesions in epithelioma of the lip. The glands should be rayed immediately with x-ray, and surgery is indicated in addition in selected cases.*

*Radiation treatment of localized skin malignancy is as nearly specific as any procedure in the entire field of medicine.*

DISCUSSION by Carl H. Parker, Pasadena; Ernest K. Stratton, San Francisco; Edwin D. Ward, Los Angeles.

THE large amount of literature, describing the successful treatment of superficial malignancies by radiation during the past ten years, has caused this method to be almost universally accepted. However, occasionally, someone attempts to discredit the use of radiation and advocates the ancient caustic methods. The caustic or paste method survives mainly as the armamentarium by which the cancer quack thrives.

The prophylactic treatment of malignancy is the most important aspect of the physician's duty. Not only the medical profession, but also the laity, should be educated as to the necessity of complete removal of all excrescences as warts, degenerated moles, persistent areas of eczema, keratosis and leukoplakia. The fact that all small epitheliomata can be readily removed by radiation should be emphasized.

A small superficial malignancy may be destroyed by any mechanical method which will entirely eradicate the nest of malignant cells. Various methods have been used with success since the barbers of Caesar's time used coals of fire and hot irons. Of course, certain local lesions may be destroyed by surgical operation, hot irons, electro-coagulation, chemical pastes, or caustics. The obligation is, however, to select the method which is easiest for the patient and most accurate and thorough from the scientific standpoint. We believe that radiation meets these requirements better than any other agent.

In the radiation treatment of superficial malignancy, either x-ray or radium may be used successfully. However, in certain types, radium seems to give the best results, its chief advantage being that

\* Albert Soiland (1407 South Hope Street, Los Angeles). M. D. University of California, 1900. Practice limited to Radiology. Fellow American College of Radiology; Fellow American College of Physicians; Fellow Northern Society Medical Radiology (honorary). Hospital connections: California Lutheran, Clara Barton, Santa Fe and Hollywood Hospitals. Publications: Frequent contributions to various journals on Radiology.

\* William E. Costolow (1407 South Hope Street, Los Angeles). M. D. University Pennsylvania. Practice limited to Radiology. Hospital connections: Hollywood, California, Lutheran, St. Vincent's and Santa Fe Coast Lines Hospitals, Los Angeles. Appointments: Lecturer in Roentgenology, Los Angeles Medical Department, University of California.

a more concentrated dose may be administered to a localized area.

In the treatment of small areas of keratosis which are breaking down, and of small localized basal celled epitheliomata, x-ray is specific. Usually one lightly filtered dose is all that is necessary. For the indurated thick lesions, however, as well as in most squamous celled growths, we believe better results are obtained by using radium. These growths are treated with radium tubes or needles, filtered by 1 mm. brass and 2 mm. rubber, giving a dosage of from 200 to 300 mg. hours per square cm. of lesion. The very thick and indurated lesions are treated at 1 cm. distance with the above method, giving from 1000 to 1200 mg. hours per square centimeter. It is preferable to divide this dosage over a period of three or four days, giving a few hours each day. Also, it seems better to use only about 50 mg. of radium to the square centimeter over a longer period of time, than to use a large amount of radium for a shorter period of time. This observation agrees with the recent work of Regaud in the radiation of testicular cells, in which he found that a large amount of radium applied for a short time led to central necrosis, leaving many cells near the periphery not sterilized; whereas a smaller amount, extended over a longer period, led to little or no necrosis, but a complete sterilization of all the cells.

We do not believe the single massive dose method has a place anywhere in the entire field of radiation. Apparently the divided dose method produces a tissue reaction which completely devitalizes the malignant cells without so completely devitalizing the normal tissues. After radiation there occurs, according to Ewing, a regression of the growth and a proliferation of the normal tissue. The cancer cells are not killed outright but succumb partly as a result of direct injury and to a greater extent from the defensive tissue reaction provoked in the normal tissues. The nuclei of the malignant cells are broken down and the chromosomes deranged, and the cells thus impaired surrounded by an area of lymphocytic infiltration with tissue proliferation. It is necessary to apply a sufficient, evenly distributed dose to all parts of the growth in order to obtain this change. It seems that the hard rays from heavily filtered radiation, given gradually, bring out this double reaction to the best advantage and with the least destruction of normal tissues.

We wish to mention the use of unfiltered radium implants and needles in the treatment of superficial skin malignancy, only to condemn it. The caustic reaction is too severe and often a slough is produced, this destruction preventing the normal tissue reaction which is so important in the eradication of the malignant cells. Often malignant cells may be found growing actively in the center of these sloughs. Superficial malignancy of the tongue constitutes an exception to the above. Here the use of needles and implants is the only treatment indicated. Apparently the difference is due to the fact that the tissues of the tongue are more vascular than those of the skin, the reaction of the normal cells better, and the repair much quicker and more certain.

Radium plaques, which may be of great value in small superficial lesions, should not be used in treat-

ing deep infiltrating prickly-celled malignancies. Radium treatment has often been criticized unjustly because dermatologists have failed with a small radium plaque to treat successfully a lesion which should have been treated by the heavy filtered intensive method. Often the soft rays from the lightly filtered plaque will heal over the surface of the lesion and leave actively malignant cells in the base with the normal tissues so devitalized by the caustic action that further treatment is difficult and usually unsuccessful.

Malignant lesions which have once been treated, either by lightly filtered x-ray or radium, are not usually amenable to further radiation. However, we have seen a number of extensive skin lesions which had been treated unsuccessfully with lightly filtered x-ray, respond later to evenly distributed, heavily filtered radium treatment; but we have not seen the reverse of this, that is, an extensive lesion in which radium had failed, cured later by x-ray. Furthermore, patients who have been unsuccessfully treated by operation, caustics, cautery, are very difficult to treat later by radiation. This is undoubtedly due to the fact that the previous treatment has so devitalized the tissues, by destroying the blood and lymph supply and forming scar tissue, that the tissue reaction which is so important to obtain in the destruction of the cancer cells, does not occur. This is a point in favor of the theory that the radiation does not directly destroy the cancer cells but produces a tissue reaction which does the work.

The preliminary use of the cautery or electro-coagulation, advised by some in the treatment of skin malignancy, is seldom necessary. Following sufficient radiation, the outer portions of the growth soon dry up and slough loose and if the area is kept clean, this takes place without danger of skin infection. In large sloughing growths with marked mixed infection, as for instance, an extensive involvement of the ear, removal by electro-coagulation, followed by immediate thorough radiation, is indicated; or the procedure may be reversed. The treatment of several patients who appeared hopeless, in which the latter method was followed, has been entirely successful.

During the four years, 1920 to 1923 inclusive, 897 cases of superficial malignancy were treated in our clinic. As yet we have been unable to tabulate them for statistical purposes to our satisfaction, although the large majority have been traced. We feel that radium, properly filtered and applied in the treatment of lip and skin malignancies, is as nearly specific as any procedure in the entire field of medicine. Practically the only failures met with were in patients who were improperly treated with radium, x-ray or other methods previously, and the tissues thus devitalized.

In the series of cases treated, sixty-one were of malignancies of the eyelids or adjacent structures. These responded almost without exception and with very little resulting deformity. Malignancy of the eyelid should be treated exclusively with radium because by this method the dosage can be better





localized and there is less danger of producing injury or deformity of the eye.

Fifty-eight cases of epithelioma of the ear were encountered. The extensive cases of this group, where there was destruction of cartilage, showed rather poor results. The early cases responded

almost without exception. The best results were obtained in the late cases by using radium filtered by 1 mm. of brass, .5 mm. of silver, 1 cm. distance and giving 800 to 1000 mg. hrs. per 2 x 2 cm. area, distributed over a period of several days. Many cases showed remarkable results with this technique and in no case were there untoward effects.

One hundred and eighty-one cases of epithelioma of the lip were treated and so far as we know, the original lesion was completely eradicated in all of them. Only four of these patients, to our knowledge, have died from glandular metastasis. Ap-

proximately 15 per cent of these lesions were recurrent after x-ray, chemical treatment, surgery and cauterization. We believe that radium will eradicate the local growth in all cases of epithelioma of the lip. The contributory lymph glands should be rayed immediately upon the institution of treatment and this combined with surgical block dissection in selected cases.

The skin malignancies located upon the extremities and trunk all responded to radiation with the exception of one case of extensive growth on the thigh, which responded for a time but later became painful and was cauterized. The ultimate result is not known.

In this series, about one-half of the cases—448—the lesions were located on the face: nose, cheeks, forehead and temple regions. The majority of these lesions were small and responded readily to radium or x-ray. The results were almost specific in all the superficial lesions of the nose. The deep lesions of the nose involving the cartilage produced the same difficult problem of treatment as the deep involvement of the ear. Here, as in similar involvement of the ear, the best results were obtained by using brass filtered radium at 1 cm. distance by the divided dose method. One striking case of extensive involvement of the entire end of the nose responded to a total dosage of 4000 mg. hrs., given over two 2 x 2 cm. areas and divided over a period of a week. The normal tissues were not damaged and are healthy and pliable.

#### DISCUSSION

CARL H. PARKER, M.D. (Professional Building, Pasadena)—I am substantially in agreement with the ideas expressed by Soiland and Costolow and I wish to lay a little added emphasis on their opening statements, with regard to prophylactic treatment. I believe that the average layman regards any cancer as an incurable disease and in fear of wasted effort, expense and pain delays treatment many months beyond the time when it should be begun. It is a fact often noted, that when a patient has a certain trouble, he hears of and comes in contact with many others having the same disease. Now, the point which I wish to make is that the best practical way of reaching the patient in need of prophylactic treatment is, by teaching the recently cured patient and urging him to spread the gospel of early treatment.

One other point is touched upon which is of great importance, in a successful management of malignant disease; namely, that the patient should be kept under observation, at suitable intervals, until the physician can be reasonably sure that a recurrence will not take place.

ERNEST K. STRATTON, M.D. (490 Post Street, San Francisco)—The excellent results observed by Soiland and Costolow in their treatment of nearly nine hundred cases of superficial malignancy show clearly what can be accomplished with radiation, when used properly. When radiation alone is depended upon, I, too, believe that the intensive filtered method gives the better results; I also believe that they are right in condemning the use of the massive dose method of unfiltered radiation, as I have seen quite a few cases of recurrences as well as considerable damage to the surrounding tissues following this kind of therapy.

From the viewpoint of a dermatologist, radiation is not always the method of choice in dealing with these excrescences, the so-called "precancerous" skin lesions or the epitheliomata. The reason for this is, that where equally good results can be obtained by other methods of therapy, such as with the curette alone, or with the curette and acid, or with the curette and unfiltered x-ray, or with electro-coagulation and desiccation, or as in some

cases, with the electro-cautery, the size, number, type, and location of the lesions will sometimes influence him in his selection of one method rather than another.

While many dermatologists have only the dermatological plaque of radium, which is 10 mgs. distributed over a 2 cm. square, I believe they are cognizant of its limitations. I do not believe at the present time, however, that anyone would attempt to treat an epithelioma of the tongue or lip, or a squamous cell epithelioma of the glabrous skin with radium unless he had an adequate amount in the proper form.

EDWIN D. WARD, M.D. (Radium and Oncologic Institute, 1052 West Sixth Street, Los Angeles)—I agree with most of the essential points of this paper, although our technic differs somewhat from his.

We are in the habit of using less screening—less dosage, and where possible, bury the needles right into the malignant tissue. By this method one is able more fully to get the effect of the beta-ray, and correspondingly reduce the total dose.

This method delivers a maximum of radiation within the lesion with a minimum dose in the surrounding tissue and if your needles are so placed as to thoroughly treat the base, the method is effective unless metastases have taken place. If metastases have taken place, it is necessary to treat the entire surrounding area and regional lymphatics with some form of deep radiation. Either heavily screened radium or high frequency x-ray, and if your treatment of the lesion proper has been done in such a manner as not to allow much penetration of underlying tissues with the far-reaching gamma-ray, there is less danger of giving any area a double dose.

I do not mean to leave the impression that heavy screening is not desirable in a great many cases and many times preferable to light screening—but as a routine procedure. For superficial malignancies I prefer the light screening, say  $\frac{1}{4}$  to  $\frac{1}{2}$  mm. of platinum.

DOCTOR COSTLOW (closing)—I wish to express my appreciation for the generous discussion of our paper. Apparently Doctor Ward has misunderstood our stand on the matter of heavy screening. As we brought out in the substance of the paper, the clearly superficial lesions, which are the type most often met in routine work, may be easily eradicated by lightly filtered radium, x-ray, or as Doctor Stratton mentions, by curette, desiccation and electro-coagulation. The chief point we wished to emphasize in this paper, however, was that we believe all indurated skin malignancies or the ones which seem to penetrate deeply respond better with heavily filtered radium. We disagree with Ward that the effect of the beta-ray is desirable in these cases, on account of the caustic effect and the danger of after-trouble. With heavily screened radium, the skin is left in a better condition and one is better able later, in the case of metastasis, to use more heavily screened radium or the high voltage x-ray to which Ward referred. If the skin is not damaged by the first treatment, there need not be fear that later treatment will cause damage to the underlying tissues by double dosage, because in treating a skin lesion by the dosage we have outlined, the total amount of radiation received by the underlying tissues is not sufficient to produce any permanent change which would contra-indicate later deep treatment if necessary.

The Pacific Coast Oto-Ophthalmological Society meets in San Francisco April 26, 27, and 28, in the ballroom of the Hotel St. Francis. All men in the above specialties are cordially invited to attend. Kaspar Pischel is president and Hans Barkan, chairman of the Program Committee.

Members of the ophthalmological and oto-laryngological examining boards will be present, and doctors interested in attaining these certificates may come up for examination at that time.

Time flies, and barbers are chirotonsors, undertakers are morticians, wiremen are electrologists, and trusts are mergers.—Detroit News.



## MONGOLIAN IDIOCY

### OCCURRENCE IN OF TWINS—REPORT OF TWO CASES

By HENRY DIETRICH \* AND HUGH K. BERKLEY

*The etiology of this peculiar disturbance in development is still obscure.*

*Mongolism in successive members of the same family is very rare.*

*The physical signs of mongolism show but slight variations in individual cases.*

*Mongolism may be complicated by rickets, hypothyroidism, adenoid growth, and congenital heart lesions.*

*There is no successful treatment for the uncomplicated disease. Intelligent treatment may improve complicating endocrine gland disturbances, but has no effect upon mongolism itself.*

DISCUSSION by William M. Happ, Los Angeles; W. P. Lucas, San Francisco.

MONGOLIAN idiocy is distinguished from other forms of idiocy by the fact that certain definite structural peculiarities of the body are associated with serious impairment of the mental functions. The condition was first described by Langdon Downs, an English physician, in 1866. At present it is estimated that from 3 to 5 per cent of all cases of congenital imbecility are of the mongol type. Several authors are of the opinion that the disease, of late years, is on the increase. This may be a true statement of fact; on the other hand, it is also quite possible that the apparent increase is due to its more frequent recognition by the medical profession. Be that as it may, its common occurrence, together with the fact that both the laity and physicians often fail to recognize mongolism, justify a short resumé of the subject.

The etiology of this peculiar disturbance in development is still obscure. H. H. Goddard collected 294 cases of mongolian idiocy in children, of whom 51 per cent were the last born of more than one child. Leeper collected 176 cases, and reports that no less than 51 per cent of these children were the last born of large families. These reports, together with others, led to the statement that mongolism is a disease due to exhaustion of the reproductive functions. Thursfield, in 1921, reviewed 42 cases. He could find no corroboration of the statement that a mongol is apt to be the last born child of a family in which the mother was near the end of her child-bearing period. He also states that syphilis, tuberculosis, and evidence of ill-health during pregnancy were not noted in these cases.

Stoltzner reported that the mothers of the patients in his series showed signs of hypothyroidism. Dolinger, in a study of twenty-five cases, could not confirm these findings.

Sajous, Sr., called attention to the relationship of insufficient functioning of the thymus gland to certain types of low mental development, particularly mongolian idiocy. One after another, and at

times collectively, disturbances of the endocrine glands have been called upon to help explain this complex condition. The thyroid, especially, has been suspected of being at play, because of some resemblance between the physical characteristics of mongolism and those found in myxoedema.

T. Halbertsma advanced the theory that mongolism is the result of defects inherent in the germ plasm. He says: "When we have mongolism in one of twins, we have a pregnancy of the two-egg type; each twin has its own chorion and amnion. In such cases, two ova are simultaneously fertilized and develop independently. In contra-distinction, twins resulting from one-egg pregnancies are practically identical and inherit the same disease present in the germ cell. If mongolism were not germinal, but acquired during inter-uterine life, the occurrence of mongolism in one of twins would be an anomaly."

Mongolism in successive members of the same family is very rare. Vander Sheer, in reporting two such cases, one with two mongols and the other with three, states that he has been able to find on record only eleven families in which more than one child was a mongolian idiot. Since that time four more cases have been reported, making a total of fifteen. We have among our records another case to add to this list. The older of the children, a boy, is now 9 years old. His sister died at the age of 3 years from bronchopneumonia. She also had a very severe congenital heart lesion. Both were pronounced mongolian idiots.

Babonneaux and Villette reported one instance of four cases in one family. Halbertsma, in reviewing the situation, up to 1923 found only fifteen cases of mongolism in one of twins, and only two of mongolism in both twins.

Mongols rarely attain adult life. We see a great many instances of mongolism in infancy and early childhood, but the majority are carried off by intercurrent disease, principally of the respiratory or gastro-intestinal tracts, before they reach the age of 10 years. William N. Berkeley cites the following remarkable case, reported by Dr. Pogue, of a mongolian idiot girl who grew up and married, had one miscarriage, and subsequently gave birth to a child, at full term, who was not a mongolian idiot.

The physical signs of mongolism show but slight variations in individual cases. The following signs are found in practically every case of mongolism: Slanting eyes, the inner canthus being lower than the outer, narrow lid apertures; brachycephaly, epicanthus, small, saddle-shaped nose, external ears atavistically malformed; gaping mouth, frequently with protruding tongue, prominent abdomen, distasis of the recti, umbilical hernia, shortened and incurved little finger, due to hypoplasia of the distal phalanx; delayed closure of the fontanelle, delayed and irregular teething, flaccidity of muscles and joints, lack of resistance to intercurrent diseases and definitely impaired mentality.

Many of the children are not able to sit up until 18 months to 2 years of age, and do not walk or talk until 3 or 4 years old. They rarely learn to speak correctly, often maintain uncleanly habits,

\*Henry Dietrich (308 Medical Office Building, 1136 West Sixth Street, Los Angeles), M. D. Rush Medical College, 1898. Interne Presbyterian Hospital, Chicago, 1898-1900. Graduate study in pediatrics, two years at clinics of Professor Pinkelstein, Berlin; Professor Peer, Zurich; Professor Knopfmacher, Vienna. Practice limited to pediatrics. Hospital connections: Children's, St. Vincent's General, and Good Samaritan hospitals of Los Angeles. Publications: Abt's System of Pediatrics (chapters on Heliotherapy and Diseases of the Salivary Glands); Peer's Pediatrics, English edition, chapter on Tuberculosis.

and usually do not attain a mental development beyond that of a 5 to 6-year-old child.

The demeanor of the mongolians is very characteristic. During the first year or two they are apathetic, often difficult to feed, and the mother remarks about her exceptionally good child. After that period, they become aggressive, restless, with a tendency to gesticulation and imitation. The disposition is lively and happy, and this change is then regarded by the layman as an evidence of progress; but unfortunately it rarely leads to anything beyond a clownish, imitative child. A love for music is noticeable in many of these children. They are not capable of school training. It is the duty of the state to furnish a proper means for educating these children, but up to the present time very inadequate provision has been made.

Fritz Talbot reports a series of observations on the growth of untreated mongolian idiots, ten in number, ranging from 4 months to 10 years of age. "There are several factors of growth in common between the cretin and the mongolian idiot. The arms, legs, and feet of both conditions tend to be shorter than the normal—more so in the former than in the latter. The greatest difference in their physical measurements is noted in the circumference of the head; that of the mongolian idiot is less than normal, while that of the cretin falls within normal limits."

Mongolism may be complicated by rickets, hypothyroidism, adenoid growth, and congenital heart lesions. The marked susceptibility of these children to respiratory infection and gastro-intestinal diseases must be emphasized.

There is no successful treatment for the uncomplicated disease. Intelligent treatment may improve complicating endocrine gland disturbances, but has no effect upon mongolism itself.

**CASE I**—Male child, age 8 weeks, one of twins, first born. Mother 26, father 28 years of age. No miscarriages. No illness on part of mother during pregnancy. Birth weight, 5 pounds. Has had a wet nurse. Now weighs 7 pounds 5 ounces. Parents state child makes peculiar noises when breathing. Is much more quiet than its twin, and seems to have no strength in back of neck. Sleeps a great deal. Is constipated. Physical examination shows a child with slanting eyes, marked epicanthus, short, wide nose, marked umbilical hernia, incurved little finger and supernumerary thumb on left hand. Very wide-open anterior fontanelle, post fontanelle  $2\frac{1}{2} \times 2\frac{1}{2}$  cm., and sagittal sutures separated for 1 cm. Flaccidity of muscles and subcutaneous tissue. Ears small, deformed, and ear canal is very small. Child holds tongue between lips continually. Bilateral hydrocele. Heart shows no evidence of congenital malformation.

Diagnosis—Mongolian idiocy.

The twin was a male child, 8 weeks of age. Birth weight 5 pounds 6 ounces. Now weighs 8 pounds 3 ounces. Physical examination reveals nothing abnormal, except that post-fontanelle is still open.

**CASE II**—Female child, 5 months old, one of twins. Ninth child. Mother 37 years, father 40. No miscarriages. Father and mother in good health. Birth weight  $5\frac{3}{4}$  pounds. This child was born first, was very cyanotic after birth. Could not feed at the breast during the first week, but since that time is able to suckle the breast, but with very poor result, as she only weighs 6 pounds at present. Dr. Homer, who referred the case to us, reports a double placenta. Physical examination shows an atrophic child with slanting eyes, epicanthus, fine, reddish hair. Large anterior fontanelle and post-fontanelle still open  $1 \times 2$  cm. Marked hypotonicity, incurved

little finger, narrow chest, deformed ears, tongue is almost constantly protruded. A congenital heart lesion was present.

Diagnosis—Mongolism.

The other twin, also female, we have not seen. However, Dr. Homer of Ventura reports that she weighed  $8\frac{1}{2}$  pounds at birth, and has steadily thrived and developed. Photographs he has kindly sent us show a well-developed child, with no suggestion of mongolism.

## DISCUSSION

**WILLIAM M. HAPP, M. D.** (523 West Sixth Street, Los Angeles)—The occurrence of mongolian idiocy in one of twins as reported by Drs. Dietrich and Berkley is extremely interesting, and, it seems to me, lends added weight to the view that the condition is due to defective germ plasm, and is, therefore, a developmental defect. As the authors state, there is no evidence that the thyroid or other endocrine glands are responsible for the condition. I think that the far too common practice of treating mongolian idiocy with thyroid or polyglandular therapy is without scientific basis. Personally, I have never seen a case show any improvement under such treatment beyond the normal improvement these children all show.

**W. P. LUCAS, M. D.** (490 Post Street, San Francisco)—The paper of Drs. Dietrich and Berkley adds two additional cases to a rapidly growing list of mongolian idiocy in one of twins. We have observed no cases of mongolian idiocy in one of twins at the University of California Hospital, although the condition itself is one which is very frequently seen.

Physiological and pathological studies have so far failed to give any clues as to the etiology of mongolian idiocy, and there exists no therapy which has the slightest influence. Talbot has shown that in some cases it is possible to produce a brief initial improvement by the administration of thyroid extract. This is unquestionably due to the associated glandular involvement in this condition. The improvement stops just as soon as the thyroid component of the clinical picture has been repaired, and one is then again confronted by a stationary condition which is resistant to all treatment.

Prevention, rather than treatment, would seem to be the direction from which help will eventually come. And the accumulation of statistical evidence, to which Dietrich and Berkley have added two important cases, is one of the most promising methods of approach.

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"After the death of Dr. Conyers Middleton (whom I have had occasion to speak of before, as the author of the attack on the dignity of physic, which was so warmly and triumphantly repelled by Dr. Mead), his widow called upon Dr. Heberden with a MS. treatise of her late husband, about the publication of which she was desirous of consulting him. The religion of Dr. Middleton had always been justly suspected, and it was quite certain that his philosophy had never taught him candour. Dr. Heberden having perused the MS., which was on the inefficacy of prayer, told the lady that though the work might be deemed worthy of the learning of her departed husband, its tendency was by no means creditable to his principles, and would be injurious to his memory; but as the matter pressed, he would ascertain what a publisher might be disposed to give for the copyright. This he accordingly did; and having found that £150 might be procured, he himself paid the widow £200, and consigned the MS. to the flames."—"The Gold-Headed Cane."

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**Dr. Marriott of St. Louis** recently visited Southern California and gave a number of lectures and clinics at the Scripps Metabolic Clinic, and before the Southwestern Pediatric Society, and the San Diego Medical Society.

These conferences proved so stimulating and encouraging that, under authority of the San Diego Medical Society, a committee is already engaged in arranging for a series of lectures for 1927. David H. Higbee, Watts Building, San Diego, is chairman of the committee.



## URETHRAL CARUNCLE

By PAUL A. FERRIER \*

*Copy of this kind makes an editor's work delightful.*

*The Editorial Councilor who examined this discourse, in his confidential report to the editor says: "An excellent paper which was read in nine minutes. You want it."*

*Herbert A. Rosenkranz, Los Angeles, one of the discussants, writes: "Doctor Ferrier's paper appeals to me from the standpoint of composition and arrangement, and of what and how much should be incorporated in a paper, and of what should be left out, as the best paper that I have heard in a long time. Its terse and clean-cut presentation stamps it as a model of medical literary art."*

*E. M. Wilder, Sacramento, another discussant, says: "Doctor Ferrier is to be congratulated on having made so complete and yet so succinct a presentation of the various aspects of the subject. His paper is a model, in form as well as substance, of what a paper on a medical subject should be."*

DISCUSSION by H. A. Rosenkranz, E. M. Wilder, W. E. Stevens.

AN ALMOST unbelievable amount of misery can be caused by urethral caruncle. Burning urination, frequency, pain, soreness, tenesmus, bleeding, vaginismus, and a whole train of nervous and constitutional symptoms. Jonathan Hutchinson tells of paraplegia relieved by removal of caruncle. Skene says, "In extremely painful neoplasms some patients give evidence of constant pain, distress, and anxiety; they are pale, emaciated, low-spirited, and wish for death." Indeed, the older clinicians gave caruncle more attention than do the present generation. Sir Charles Clark in his work on "Diseases of Women" described caruncle more than a hundred years ago. Sir James Y. Simpson brought it prominently before the profession. Goodell fully described it, and Augustus Clark reviewed the literature at the Ninth International Medical Congress in 1887 and added his own histological studies. Lawson Tait in noting their tendency to recur, cites a case in which for forty years it had been removed every five years.

All have been impressed with their extraordinary sensitiveness and have sought an explanation. Emmet predicated a sympathetic nerve supply, but no nerve elements are found, save in the epithelium. Braxton Hicks blamed degeneration of the nerve endings. A considerable proportion are not sensitive. It is impossible not to connect the severe general nerve irritation with the proximity of the highly innervated clitoris.

**Etiology**—The etiology has not been established. Neuberger attributes it to gonorrhea, but admits having seen cases in which gonorrhea was excluded. The fact that caruncle practically always occurs on the lower margin of the meatus, just where Skene's ducts open, gives support to the causal relation of ruptured cysts of these ducts.

Chronic irritation has been proved to play a part through the palliation afforded by cleanliness and bland urine. Infections of the urinary tract higher up do not predispose to it.

**Pathology**—Caruncle occurs at any age from 6

to 90. It is most common in married women of midlife. It is a vascular polyp, according to Virchow; a mucous membrane wart, according to John B. Murphy. Grossly, it is a vascular tumor, pinhead to raspberry in size, sessile or pedunculated, generally single, located nearly always on the posterior rim of the female urethral meatus. It is red, congested, more so at menstruation, easily bleeding and often exquisitely sensitive.

Histologically, it is composed of tufts of capillaries in a fibrous and muscular stroma, infiltrated according to its degree of inflammation with mono and polynuclear cells. No nerve elements have been demonstrated except in the squamous epithelium. This is often ulcerated.

Edward L. Young (1915) reported nineteen cases, five of which were malignant. Of these, three were traced four to eight years later, and only one had a malignant recurrence. The general experience would not point to so high a proportion of malignancy. Of a larger series in which the removal had been by cautery or excision, one-third had benign recurrences. All have noted a large proportion of recurrences.

Crenshaw, reporting his clamp and cautery method of removal in 1920, had had 118 cases, with four recurrences. It may be, however, that, since patients lived at a distance, all recurrences were not reported. A recent communication from him states that the recurrences are not many. Cases have frequently been reported in which the growth recurred again and again.

**Diagnosis**—It must be differentiated from:

1. Prolapsed urethral mucosa, which will be seen to pout completely around the meatus. Moreover, it can be replaced. In cases of prolapse, after a previous operation, the pouting will be irregular, but the replacement should still be possible. Shortening of the urethra may be apparent on endoscopy.

2. Varicosities. These are bluish, elastic, and reduce under compression.

3. Condylomata. They are warty, multiple, and painless.

4. Cysts of Skene's glands.

5. Solid tumors of the urethra. Fibromas and carcinomas of the urethra are rare. They are firm and are apt to extend up the urethra.

Carcinomatous glands may be present.

**Treatment**—The conditions to be met are:

1. Complete eradication.
2. Restoration to normal of the urethra, avoiding stricture or pulling down of the bladder neck.
3. Preserving a specimen for histological study.
4. Making the procedure simple, the inconvenience least, and the convalescence shortest.

Various methods of treatment have been used, but, as emphasized by John B. Murphy, the *essential of all is complete ablation of that part of the basement membrane bearing the tumor*. If it is left, the tumor will recur.

Pinching, snaring, ligating, cutting, cautery by heat or acids, fulguration, and other methods have been used. Few lesions of such distressing symp-

\*Paul A. Ferrier (Citizens' Savings Bank Building, Pasadena, California). M. D. University Pennsylvania, 1911. Mayo Clinic, 1915-1918. Practice limited to Urology and Surgery. Hospital connections: Pasadena General Hospital.

toms have been treated so unsurgically by surgeons. An eminent surgeon, to my knowledge, cauterized a caruncle with a soldering iron and left a stricture.

A case has been reported in which repeated excisions of a scar had drawn the trigone of the bladder outside.

Kelley, Murphy, and many others have advocated excision, and when skillfully done, leaving circumferential mucosa, it is useful, particularly in the extensive sessile type. It has the advantage of getting beyond the farthest margin and of preserving tissue. But it is a hospital procedure with an uncomfortable and prolonged convalescence.

Fulguration is widely used, but it is apt to burn unnecessarily deep, leaving a heavy scar with subsequent deformity and, in any case, an eschar, which separates, leaving a wide granulating surface to slowly epithelialize. Repeated fulgurations are often necessary.

Cautery by heat has the same objections, and acids are even less subject to control.

A very satisfactory method for all but the broadly sessile type is the clamp and cautery suggested in 1920 by Crenshaw.

The procedure can be carried out in the office.

The patient is placed in the lithotomy position and, after soap and water cleansing, local anesthesia is obtained by a 10 per cent cocaine jelly swab in the urethra for a few minutes. An assistant separates the labia. The urethra is dilated and the growth defined. The caruncle is picked up with a fine forceps and clamped beyond its base with a miniature hemorrhoid clamp. The protruding caruncle is cut off and preserved for section, while the cut edge is cauterized with 15 per cent acid of nitrate of mercury on a swab. Lateral tags are treated in the same way.

As a modification of this method, I have found it at times desirable, if the tumor be sessile, to hold it with more than one fixation forceps in order to draw it all into the clamp. And further, in order to avoid the uncertain control of the acid caustic, I prefer a small electrocautery such as is used by nose and throat surgeons, searing the cut edge exactly as in the clamp and cautery operation for rectal hemorrhoids. I use infiltration anesthesia.

Advantages of this method of treatment:

1. It is a simple office procedure.
2. It is painless with local anesthesia.
3. The field is not obscured by bleeding.
4. Immediate relief is obtained.
5. A specimen is available for microscopic diagnosis so that malignancy can be recognized and appropriately treated.
6. On account of the narrowness of the one or more longitudinal scars, a minimum of epithelialization is necessary, healing is prompt, cicatrization light, and subsequent deformity avoided.
7. Recurrences are few.

#### DISCUSSION

HERBERT AUGUSTUS ROSENKRANZ, M. D. (W. P. Story Building, Los Angeles)—Doctor Ferrier's method impresses me as being the most effective procedure for dealing with caruncle of the urethra.

E. M. WILDER, M. D. (1027 Tenth Street, Sacramento, California)—A multiplicity of methods of treating a con-

dition, medical or surgical, is always evidence that each of them leaves something to be desired and that no best method has yet been found, and obviously this is true of the many methods of treating urethral caruncle cited by Ferrier.

To my mind, except for the difficulty of maintaining asepsis and obtaining primary union, treatment by excision and suture has always been the most accurate and complete procedure and most nearly met the conditions laid down by our author, and if this one obstacle could be overcome would approximate an ideal treatment for the condition. Yet, as this occasional failure to get primary union caused pain, delayed recovery and frequently produced undesirable cicatrices and, as because it seemed impossible to keep the field dry and aseptic with dusting powders, and we had no liquid antiseptic powerful enough to keep the wound aseptic without causing irritation when repeatedly applied locally, there seemed to be no hope of overcoming this one great objection to treatment by excision and suture, the best professional opinion turned away to some form of clamp and cautery procedure as giving less discomfort and quicker, if not more accurate, results. And probably until very recently some form of clamp and cautery operation, and particularly Dr. Ferrier's ingenious modification, has represented the most advanced thought on the subject.

But I believe this has been changed by the discovery of mercurochrome. Used as a local antiseptic, this agent is sufficiently powerful to keep the wound aseptic and is capable of repeated local use without causing undue irritation. It is now possible to avail ourselves of the manifest advantages of the excision and suture method without the one great disadvantage that formerly militated against it. It is now possible to make a complete, accurate excision, going deliberately deep enough to get the basement membrane and prevent recurrence (which accuracy and completeness can never be obtained in the same degree with any form of cautery operation), close with a non-absorbing suture, preferably fine dermol, and then, by repeatedly touching the line of incision and the sutures with a small cotton applicator dipped in freshly made 1 per cent mercurochrome, maintain perfect asepsis in spite of the urinary flow, obtain perfect and accurate primary union, and avoid pain, delay, scarring and recurrence.

WILLIAM E. STEVENS, M. D. (Flood Building, San Francisco)—Doctor Ferrier has brought out a number of points in his interesting paper, some of which are not always given the consideration they deserve.

The impression is more or less general that all caruncles are painful, while the doctor calls attention to the fact, important in the diagnosis of this condition, that a considerable number are not sensitive.

The most interesting case that I have seen for some time was that of a woman 60 years of age, who had complained of frequent and painful urination for many years. She was emaciated, weak, and very nervous. Examination revealed multiple caruncles, which were exquisitely sensitive. Following their removal by fulguration the frequency and pain disappeared; she gained strength and weight and was most grateful for the relief obtained.

Although I have obtained good results with fulguration properly applied, I believe that the method of treatment described by Ferrier is of greater value than any heretofore advocated.

Doctor Ferrier is to be congratulated on the concise and interesting manner in which he has covered this subject.

"The basic etiology of exophthalmic goiter has finally been determined. A recent writer states it something like this: 'Exophthalmic goiter is an aggravated form of anxiety neurosis, a structuralized fear at the symbolic level, caused by a particular pathogenic situation in the form of repression of father impregnation phantasies plus autoeroticism and active sexual repression—a mechanism expressing itself in the thyrotropic individual through the thyroid segment because of its phylogenetic history and relations, which accounts for the fact that fifteen females to one male are affected by this disease syndrome, the case in the male, possibly, being an instance of early pathogenic inversion or distortion involving the same mechanism.'"—Journal Kansas Medical Society, February, 1926.



## - BEDSIDE MEDICINE FOR BEDSIDE DOCTORS -

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects and discussants invited. Useful extracts from letters will be published.

### THE MANAGEMENT OF PATIENTS WITH WHOOPING COUGH

**The Editor**—When one of our good "family doctors" suggested that we make "The Management of Patients With Whooping Cough" a subject for Bedside Medicine for Bedside Doctors, I was dubious about its interest. But I was mistaken. This, to me, is one of the most interesting and important discussions we have had.

Of course, we will have many and quickly changing methods of treatment of this extremely serious disease of childhood until a specific treatment is discovered, and then we will grow more uniform and routine in our management of its victims.

I am much impressed with Jessie Farmer's observation about how closely the public follow us in our innovations in treating a widely prevalent disease like whooping cough.

There is much food for thought in the wholesome, dignified manner in which many doctors frankly differ in their opinions of the value of this and that remedy. That's what these discussions are for, to help us find out each other's methods and opinions, and perhaps we and the public may profit thereby.

Bedside Medicine for Bedside Doctors now appears regularly. We have many letters commending it, and so far none that criticize. Several of the discussants tell us that their comments are their maiden efforts for publication.

We need a few more subjects suitable for discussion. Please make suggestions.

**T. C. McCleave, M. D.** (Medical Building, Oakland)—The management of patients with whooping cough involves first the highly important general hygienic care.

The child should be kept quiet, in warm, dust-free, well-ventilated rooms, or, preferably, as much as possible in the open air and sunshine if the weather is suitable. Properly regulated direct sunbaths to the naked skin are beneficial to the child's general condition, improving the appetite and nutrition. Sleeping-rooms should be well ventilated and warm. Practical points often neglected, but of no value in preventing the paroxysms which commonly occur when the child goes to bed, are to have him undress in a warm room and to thoroughly warm the bed into which he is to go, in cold weather using tennis flannel sheets or thin blankets instead of linen or cotton sheets. In a severe case, complete bed-rest for some days is advisable.

The diet should be nutritious and easily digested, in severe cases with vomiting preferably liquid or semi-liquid, and given in small feedings at intervals of two or three or four hours. When vomiting occurs, food taken immediately thereafter will often be retained.

But few drugs need be considered. Quinin, in doses of one and a half grains for each year of age, given three or four times daily, seems frequently to do good. Anti-spasmodics are, of course, indicated, and sodium bromide, belladonna and antipyrin, either separately or together, are most frequently used. Lately, I have used luminal in spasmodic coughs, in doses of from one-sixteenth to one-eighth grain every three or four hours, with

excellent effect. Codein, in appropriate dosage, may be necessary in some cases, and is, in my opinion, a very useful and unobjectionable drug. It is not "habit-forming," as many seem to think, rejecting it on that account. Other narcotics I never use. Inhalants are of little value, and their use is so commonly attended by impairment of ventilation as to make them objectionable. Especially obnoxious is a much-touted nostrum vaporized by heating, which I frequently find in use to the child's detriment.

Vaccine therapy with killed cultures of the Bordet-Gengou bacillus is often of value, though results are by no means uniform. Present practice is to use a (freshly prepared, if possible) polyvalent vaccine of much higher dosage than formerly believed sufficient. Three to five doses, on alternate days, are commonly used, beginning with from five hundred million to one billion organisms, and doubling the amount of each successive dose if excessive reactions are absent. Treatment should be begun as early as possible, and especially should exposed children be given prophylactic vaccine treatment, three doses as above outlined.

X-ray treatment of whooping cough is now widely used with very favorable effect, and is recommended in all cases where paroxysms are severe and do not yield readily to other treatment, or where cough is unduly prolonged, due to the persistence of enlarged tracheo-bronchial lymph nodes.

Many mothers and some physicians regard whooping cough as a disease of minor importance which all children must have sooner or later, and therefore not worth while trying to avoid. Nothing could be more fallacious. Whooping cough is responsible for a very high mortality in young children, and at any age may be followed by most serious consequences. Those entrusted with the care and supervision of children should therefore make every possible effort to protect them against this disease, and, if infected, to give them adequate treatment.

**Hugh Berkley, M. D.** (1136 West Sixth Street, Los Angeles)—Dr. McCleave's discussion leaves little unsaid, and is very clear and concise.

In cases with severe vomiting, it has been our personal routine to limit liquids and give the thicker foods, such as cereals, rice, custards, and the like. We feel that these foods are better retained than the liquids.

We have used inhalants and with definite benefit. In doing so we do not, however, use the tent method, but keep the steam in the room. This allows good ventilation as well as warm, moist air.

One factor which McCleave did not mention in the treatment of the disease, is the maintenance of a voluntary quarantine. The law allows these children to run free except for attending school. We believe it to be the duty of the physician in charge

to insist that children with whooping cough be kept away from other children except those known to have previously had the disease.

Prophylactic vaccine therapy in patients known to have been exposed is valuable and worth trying, though it is not 100 per cent effective.

**H. J. Ullman, M. D.** (Santa Barbara Cottage Hospital, Santa Barbara, California) — The value of the roentgen ray in the treatment of whooping cough during the early acute stage is being questioned. Our experience here has been limited, but our impression, gathered from the parents' statements, is that the severity and frequency of the paroxysms are lessened. In the later stages, and it is with these cases that we have had the most experience, we have found it to give marked relief. The effect is most noticeable where the cough has persisted for weeks and there has been no further response to drugs or vaccines. These individuals frequently show loss of weight, and they cannot get a night's rest because of the paroxysms, which are more frequent at this time.

The technique of treatment varies to some extent with different operators. Our method at present is to give small doses every day or every other day to the mediastinum and medial lung region, front and back alternately. Four in all of these are given, two anterior, two posterior, and the effect noted. In from ten days to two weeks this is repeated if necessary. The first series usually produces a distinct modification of the severity of the symptoms and is sufficient. This improvement has been noted as early as the night following the second dose. Occasionally, there will be a slight increase in the symptoms after the first sitting. In these cases it may be advisable to decrease the amount of radiation at subsequent sittings. No rule can be laid down for this. Each case must be individualized and the amount of the previous radiation taken into consideration. The age of the patient must be considered. The younger, the smaller the dose. Our cases, while a small series, have varied in age from infancy to over sixty-three. Our treatment has been entirely with the longer wave lengths after the report of Leonard, and we do not believe that the shorter wave lengths have any place in the treatment of pertussis.

The theory has been advanced that the effect of the radiation is on enlarged bronchial nodes. We have taken chest films in some of our cases and are not yet convinced that the irritation is entirely due to glandular enlargement, as we have obtained our results where no enlargement was demonstrated.

Finally, we believe that roentgenotherapy, for the present at least, should be reserved for the older subacute and "chronic" cases that have failed to respond to the established methods of treatment as outlined by Dr. McCleave.

We cannot emphasize too strongly that the roentgen treatment of whooping cough should only be done by a physician trained in such work. The possession of an x-ray apparatus and ability to take good pictures does not qualify a physician, much less a technician, to give treatments with such a powerful agent. Improperly used, it may do great

harm. In competent hands it is a perfectly safe procedure.

**Myrl Morris, M. D.** (490 Post Street, San Francisco) — Dr. McCleave has enumerated very concisely the salient points in the care and management of one of our most dreaded diseases. Particularly is it of value because his paper represents the results of years of practical experience.

In regard to the therapeutic value of radiation, we too were formerly of the opinion that definite, immediate improvement was noticed after the first or second roentgen-ray treatment, but since reading Dr. Faber's able and very convincing article in the *Journal of the American Medical Association*, September 12, 1925, we are withholding any definite conclusion. Dr. Faber has shown rather convincingly that the course of irradiated cases and a similar series of controlled untreated cases follow almost the same plotted curve through a course of eight weeks. With this in mind we probably have been overenthusiastic in drawing our conclusions without comparing these treated cases with untreated cases in the same epidemic and at the same period in the course of the disease.

We also have been interested in the effect of intramuscular injections of ether, but because of the pain and the necessity of a physician administering the injection we have withheld this treatment for our more severe cases and cases in tiny infants. These drawbacks are overcome by using the method of Goldbloom of Montreal, that is, of administering ether by rectum in a suspension of olive oil. He found that the ether was immediately taken up by the blood and excreted through the lung tissue, thereby getting the same effect as by intramuscular injection. According to his report, 90 per cent of his cases showed definite improvement.

**Edward J. Lamb, M. D.** (Central Building, Santa Barbara) — Hygienic care of the patient with whooping cough is of utmost importance.

The prophylactic treatment is worthy of consideration. My only mortality in whooping cough occurred in a premature baby four weeks old who had been exposed to whooping cough at home.

Diet, fresh air, sunshine, and warm bedding are all effective in warding off the paroxysmal attacks of coughing. Patients who are running a temperature of 100 degrees are confined to bed. Others are ambulatory or semi-ambulatory, depending upon their physical condition.

It has been my experience, through questioning parents, that inhalants (benzoin compound or creosote) are of great benefit. I find that by using the Robinson's electric steam kettle an even distribution of steam is maintained at little effort.

My results with vaccines have been favorable. Over 60 per cent show good results after vaccine therapy has been started. I believe that if a freshly prepared vaccine of Bodet and Genou bacillus (polyvalent) is used in large doses, one billion for an initial dose and doubling the dose each succeeding treatment, the treatments being given from two to five days apart, depending upon the severity of the



case, the duration of the disease will be shortened and the paroxysms lessened.

I have recommended x-ray therapy in infants under one year and also in children of marked instability. My cases treated by x-ray, although limited, have shown marked improvement.

Anti-spasmodics are used routinely for the cough. The heart is watched in every case. Tincture strophanthus, dose of mss.-mi. is used for stimulation. I would emphasize the importance of watching for cardiac weakness and the benefit derived from administering stimulation.

Calcidin, which contains 15 per cent available iodine in combination with calcium, seems to be the most effective drug to lessen the paroxysms. It is best administered in doses of gr. 1/3 every half hour for four or five doses, given at night.

**Jessie C. Farmer, M. D.** (Felton, California)—The belated adoption by the laity of remedial measures abandoned by the medical profession makes it difficult for the physician to enforce his plan of treatment of whooping cough in the homes of the afflicted. Cresoline or other repulsive smelling vapors yet smother the house of the pertussis victim. The vaccine wave has surged over the more advanced parents, leaving them with an exaggerated faith in the prophylactic and curative efficacy of dead cultures. Later there will be a clamor by the laity for the magic of the x-ray.

The people are following more closely than formerly our tortuous trail of changing methods, with this difference. We *hoped* our measures would prove to be specific, whereas the followers believe they are specific.

In treatment the first endeavor should be to clear away the debris of superstition. Unless for some imperative reason, do not add to the parents' panic by mentioning possible sequelae or complications. Try to instruct the mother to maintain a calm attitude during the paroxysm. Consternation and agitation on the part of the parent or attendant frightens the child and increases the severity of the spasm; also it encourages him to experiment in eliciting sympathy and solicitude.

Sulphate of codeine will help to allay the frequency and violence of the paroxysms, but should be withheld in the average cases.

Cerebral hemorrhage should be dreaded for two reasons: The immediate danger to life and the more than possible prospect of epilepsy at about puberty should the patient survive.

For hundreds of years all thinking people have been well aware of the communicability of whooping cough. Parents become panicky, and with reason, when their child contracts the disease; yet human nature is such that the probabilities are that otherwise admirable people will become lax before infectivity has passed and passively permit the child to infect others. Absolute quarantine seems a harsh measure, and would be effective only in those cases discovered at the inception of the disease. Again and again we must explain the caution and not become weary in our reiterated injunctions for isolation and a better sense of social obligation.

McCleave has covered the field of therapeutics and hygiene with clarity and brevity.

**W. Edward Chamberlain, M. D.** (Stanford University Hospital, San Francisco)—In the past two years a great many x-ray treatments have been given for whooping cough. Many articles have appeared in the literature, purporting to show the efficacy of the treatment. For the most part such articles consist in a description of a particular worker's technic, and a tabulated series of cases in which the administration of x-ray treatment was followed by marked improvement. (Post hoc ergo propter hoc.)

Struble (Journal A. M. A., vol. 85, page 815, September 12, 1925), working at the Stanford clinics (Children's Clinic and Division of Radiology), was the first worker to parallel his x-ray-treated cases with a series of untreated controls. His careful work gave us new information concerning the natural history of whooping cough, and in the light of this new information there seems to be little or no reason for supposing that x-ray therapy has any influence on this condition. In Struble's series the untreated cases ran the same course (displayed the same rapid improvement at the same stage of the disease) as did the x-ray-treated cases.

Lest it be thought that Struble's technic was at fault, it should be noted that in previously reported series dosage has not seemed important. Workers using relatively large doses obtained results apparently no different from those using the smaller doses. Struble's dosage approached very closely that used by Bowditch and Leonard.

Interestingly enough, the mothers of the children in Struble's x-ray-treated series held the x-ray responsible for the children's improvement; but parallel and equal improvement in the untreated controls indicated that this was a part of the natural course of the disease.

In the management of patients with whooping cough, then, I would leave out x-ray therapy, not through any feeling that the treatment in competent hands is dangerous, but on the ground that it is futile.

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**Suppuration of Shoulder Joint**—The two cases reported by Benjamin S. Barnes, Shenandoah, Iowa (Journal A. M. A., March 6, 1926), illustrate the importance of the early drainage of suppurating joints. In one of the cases, destruction of joint structures had occurred when Barnes first saw the patient. Immobilization may be advisable early in severe cases, but as the severity of the symptoms abates it is probably best to allow considerable freedom of movement combined later with passive motion. The active exercise of suppurating joints, as advocated by Willems, seems too severe for the more acute cases. If ankylosis seems unavoidable, precautions should be taken to establish the most useful position of the parts that is possible.

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**The American Board of Otolaryngology** has arranged for an examination during the month of April at Stanford University Medical School, Clay and Webster Streets, San Francisco, California, Tuesday, April 27, at 9 a. m. Applications may be secured from the secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

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**The Phi Chi Medical Fraternity** will hold a luncheon during the annual session of the California Medical Association in Oakland. The exact date and place of the luncheon has not yet been decided upon, but a notice will be posted in a convenient place at headquarters. Members are urged to attend.

## Clinical Notes and Case Reports

### CONGENITAL ATRESIA OF ESOPHAGUS

REPORT OF ONE CASE

By S. SCHIRO \*

On September 22 last Dr. F. Bonura, my associate, delivered a woman, at full term, of an apparently normal baby. Labor was somewhat slow, the woman being 35 years of age and a primipara. Both parents in good health and no history of syphilis. Presentation was an O.I.R.A. and during the last stage forceps had to be used. The child was somewhat asphyctic, but he revived promptly on artificial respiration.

On the following day the nurse reported to us that the baby had attacks of choking and cyanosis, at intervals, apparently from swallowing mucus, and particularly after the administration of sterile water by mouth. Gradually these attacks became more pronounced and I witnessed one such attack after giving a few drops of water. The infant seemed eager to take fluids, but a few minutes later he would choke, become cyanotic and a foam-like expectoration would appear from both the nostrils and the mouth. To relieve his distress during such attacks his head had to be lowered and mucus wiped out from his throat.

On the third day pneumonia developed and the dyspnea became intense. Temperature 100 to 104. Congenital occlusion of the esophagus and consecutive ingestion pneumonia was the evident diagnosis, and therefore liquids by mouth were totally withheld.

The child improved on the sixth day, respiration becoming nearly normal, but expectoration was always accompanied by attacks of choking and cyanosis. In order to confirm our diagnosis I attempted to pass a small catheter through the esophagus and invariably the tip of the catheter would stop at about four inches from the opening of the mouth. Dr. Lettice, whom I consulted, obtained the same results in a similar attempt, and we decided to have an endoscopic examination by a bronchoscopist. As this congenital anomaly is known to be unamenable to treatment and as the parents objected to any major surgical procedure, nothing more was done and the child died of inanition on the eighth day. A necropsy was performed in the presence of Drs. Lettice and Jesberg. The post-mortem confirmed our diagnosis. We found the upper portion of the esophagus ending in a blind pouch at about two inches below the larynx and the lower portion entering the trachea just above its bifurcation, as we had suspected. In fact this is the most common variety of congenital atresia of the esophagus, being found in about 70 per cent of all cases, as shown by Plass, Hirsh and others.

In a rather hasty review of the literature on the subject I have found that with this case the number of congenital occlusions of the esophagus, reported since 1703, amounts to about 150.

The most comprehensive study is the one by Plass, in 1919, who reported 136 cases verified by himself, 13 unverified, covering the period from 1703 to 1916. The other three varieties of occlusion of the esophagus are: One is represented by an upper and a lower cul-de-sac, connected by a strand of tissue. A third type is similar to this, but there is no connection whatever between the two distant segments. The fourth type is represented by a diaphragm-like membrane occluding the esophagus.

Three other malformations of the esophagus must be

kept in mind: one (case reported by Fisher) very rare, presents a double esophago-tracheal fistula, both the upper and the lower segments of the esophagus being in communication with the trachea. A simple fistula may be the only anomaly between the esophagus and the trachea. Lastly, a partial or complete doubling of the esophagus. Therefore, in the presence of symptoms of congenital atresia of the esophagus we must keep in mind these seven types of malformation, as both prognosis and treatment will vary according to the variety.

As to the embryologic explanation of this congenital anomaly the most favored one is the failure of closure of the tracheo-esophageal septum (Hirsch) and the fact that the proximal and distal portions of the esophagus have different sources of origin (Ochsener). The upper extremity of the esophagus develops from the ectoderma, the lower portion, with the intestinal tract and the respiratory apparatus, from the endoderma.

Fistulous communications between the esophagus and the trachea are almost always situated at the bifurcation of the trachea, and the conclusion may be drawn that the membrane separating the esophagus and trachea closes last on this spot (Losee).

Functional spastic occlusion of the cardiac end of the esophagus must be also reckoned as a possibility. In the four occlusion types the one amenable to surgical treatment should be the fourth type, in which one single occluding membrane along the esophagus is the only anomaly existent. In the other three types surgery offers no prospect of relief as far as I know. In the presence of suspected congenital atresia of the esophagus, two things should be done immediately before pneumonia sets in:

1. Roentgenography of the gastro-intestinal tract, as suggested by Jackson, in order to ascertain if any air has already penetrated the stomach through a possible tracheo-esophageal opening.
2. Endoscopy of the esophagus.

These two procedures will help greatly in determining the type of anomaly under observation, and therefore the plan of treatment. If the x-ray examination reveals no air in the gastro-intestinal tract, this would point to the absence of any communication between the esophagus and the trachea. Inspection of the esophagus, through endoscopy, will ascertain the occlusion and it will rule out the spasmodic cardiac stenosis.

In the presence of these two findings I think surgical intervention is amply justified, as there is a possibility of dealing with the fourth type of occlusion. I mentioned above, that is the one in which a diaphragm-membrane occludes the otherwise well-developed esophagus. Gastrotomy and endoscopy through the lower segment, combined with endoscopy through the upper segment, in skillful hands, should be feasible. In the presence of a membrane, this could be cut through the endoscope and the function of the esophagus established. In the other three types we are confronted by a rather hopeless task. In a large number of cases gastrotomy has been done, but has failed invariably. Shock, hemorrhage and broncho-pneumonia are the usual complications. In one case jejunostomy was tried and failed (Plass). Richter advocated gastrotomy plus closure of the upper end of the lower esophageal segment. Two patients were operated on. The first died soon after the operation; the second lived for twenty hours. E. Weiss of Jefferson Medical College thus concludes an article, in which he reported three cases: "It does not seem that these infants could stand the ordeal of chest surgery, and yet it is only to advances of surgery within the thorax that we can look with any hope for success in the treatment of this anomaly."

In conclusion, the practical points that I would like to emphasize to those who may encounter this rare congenital anomaly are:

1. At the appearance of choking and cyanosis in newborn infants, suspect immediately congenital atresia.
2. Have roentgenography of abdomen and endoscopy of esophagus made.
3. In the absence of esophago-tracheal or esophago-bronchial fistula (no air in the gastro-intestinal tract) operation is indicated immediately before ingestion pneumonia complicates the difficult condition.
4. Operation should be performed with the help of a competent bronchoscopist.

\*Salvatore Schiro (649 South Olive Street, Los Angeles). M. D. University of Palermo, Italy. General practice with special attention to urology and general surgery. Hospital connections: Angelus Hospital, Roosevelt Hospital, Los Angeles. Graduate Study: Italian Military Medical School in Florence, Italy, 1900-1901. Visiting Surgeon at Charity Hospital, New Orleans, 1910. Volunteer Medical Service Corps in U. S. A., 1918. Present Scientific Organizations: Los Angeles County Medical Society; California Medical Association; American Medical Association. Publications: Treatment of Syphilis by Mercurial Inhalations, N. O. Med. and Surg. Jour., November, 1909; Treatment of Neurosyphilis by Mercurial Inhalations, N. O. Med. and Surg. Jour., January, 1911.



## EDITORIALS

### HOW DO YOU LIKE THE BINDING OF THIS ISSUE?

There are two methods of binding magazines: one by *sewing* and the other by *stapling*.

Sewed magazines open out *flat* at any page, while those fastened with wire staples will *not* open out flat. Heretofore CALIFORNIA AND WESTERN MEDICINE has been stapled. This issue is sewed. The cost is not more than \$90 per issue, of 5500 copies, over and above the cost of stapling.

This issue is sewed to make a practical demonstration between the two methods. Communicate with Dr. Emma W. Pope, Secretary of the California Medical Association, and tell her which method you prefer. A postcard will do.

### THE 1926 SESSION OF THE CALIFORNIA MEDICAL ASSOCIATION

Oakland and the physicians of Alameda County are hosts to the California Medical Association at its seventy-fifth annual session to be held during the week beginning Monday, April 26, 1926.

Oakland is a splendid city, easily accessible by water, motor, and rail transportation; its hotels and other accommodations for visitors are excellent, and its people hospitable.

Our Alameda County members have planned well and worked hard to make the stay of visiting doctors entertaining and instructive, and they are prepared to take care of all who attend.

We are meeting in the home town of President E. N. Ewer, and Clarence A. De Puy is chairman of the committee of arrangements.

Monday and Tuesday will be largely given over to clinics in the various Oakland hospitals, to be conducted by distinguished invited physicians and surgeons.

Ample social entertainment has been provided, including some golf tournaments.

The program is published elsewhere in this issue.

### UTAH MEDICAL ASSOCIATION

Elsewhere in this issue is published an outline of the program of the Utah Medical Association, which holds its annual session on May 6, 7, and 8.

It appears from this program that the Utah Association is adhering to the plan of having all its meetings general ones. The complete program, with the names of officers and committees, has not been received in time to include in this issue.

### "THE GOLD-HEADED CANE"

Paul Hoeber, Inc., has rendered a service to physicians and the cause they espouse in making this exquisitely beautiful "Autobiography of the Gold-Headed Cane," by William Macmichael, available to all who care to read.

This story was first issued in 1827 and a second edition in the succeeding year. A third edition, containing other matter and edited by William Munk,

was issued in 1884. The present printing (1925) is from the second edition (1828) with an introduction by Sir William Osler and a preface by Francis R. Packard. Its 250 pages contain fully twice as many pleasurable stimulants to reflection that will course through the mind of the physician who will leisurely peruse the story as there are pages in the book.

In the unfolding of the story of the beginnings of scientific medicine the reader secures entrancing glimpses into the lives of a score of pioneers whose names are household words today. The gold-knobbed cane, as is well known, was for a period a universally accepted identification of the physician, but THE Gold-Headed Cane had a crossbar for a top instead of a knob. This distinction Francis Packard tells us is explained by Munk by the statement that Radcliffe, its first owner, was a rule unto himself and, therefore, preferred a handle of a distinctive character for his cane. He succeeded in his purpose so completely that his cane now rests in a mahogany and glass case in the Royal College, but the innovation was the beginning of the end of gold-headed canes as hall marks of physicians.

THE Gold-Headed Cane was carried successively by Radcliffe, Mead, Askew, Pitcairn and Baillie, and bears their various arms engraved upon its head. A foretaste of the cane's revelations is gathered from this beginning of its story:

"When I was deposited in a corner closet of the library, on the 24th of June, 1825, the day before the opening of the New College of Physicians, with the observation that I was no longer to be carried about, but to be kept amongst the reliques of that learned body, it was impossible to avoid secretly lamenting the obscurity which was henceforth to be my lot. Formerly the *entrée* of palaces had been open to me; I had been freely admitted into the houses of the great and the rich; but now I was doomed to darkness, and condemned to occupy the corner of a library—spacious and splendid, it must be allowed, but where I was surrounded by nothing but the musty manuscripts of defunct doctors."

A leisurely perusal of this medical historical classic will recharge a doctor's "B" batteries and he may lay the book aside with a readjusted sense of values.

### FUTURE MEDICAL MEETINGS

All Western medical and health agency organizations are invited to keep California and Western Medicine supplied with the dates, name and address of executive officer of coming meetings for insertion in this directory.

American Medical Association, Olin West, Chicago, Secretary, April 19-23, Dallas, Texas.

California Medical Association, Emma W. Pope, Balboa Building, Secretary, April 26 to May 1, Oakland, California.

Nevada Medical Association, Horace J. Brown, Reno, Secretary, September 24-25, Reno, Nevada.

Utah Medical Association, Frank B. Steele, Salt Lake City, Secretary, May 6-8, Salt Lake City.

Pacific Coast Surgical Association, Edgar L. Gilcreest, San Francisco, Secretary, February, 1927, Del Monte.

Pacific Northwest Medical Association, Frederick Eplén, Spokane, Secretary, July 1-3, Spokane.

Pacific Coast Oto-Ophthalmological Society, Kaspar Pischel, San Francisco, President, April 26, 27, 28, San Francisco.

The influence of surgery upon medicine has almost reached its limit, and from this time on every step in advance in medical science will set the surgical indicator back a little nearer to vanishing point. It needs no great degree of prescience or second sight to make this prognostication, but only a discernment of the signs of the times, a mind alert to read the handwriting on the wall. It might, with equal justification, be said that the advance of internal medicine has been enormously greater than that of surgery.—Medical Standard.

## - The MONTH with the EDITOR -

Notes, reflections, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

There is no zeal like the zeal of a layman with a minimum of medical knowledge when he is appointed to a position allowing the application of such information.—Robert Pollock (Bulletin San Diego County Medical Society, February 19).

Over 10 per cent of the physicians of New York State, outside of New York City, are health officers, and over 75 per cent of the health officers are active members of the medical society of the State of New York.—New York State Journal of Medicine, February 1, 1926.

The co-operation and team work now operating so successfully between the thirty medical publications published by state units of the American Medical Association, through our most efficient Co-operative Advertising Bureau, is treated editorially in the February 10 issue of the Journal of the American Medical Association.

Not enough members of our state associations realize the value of this service by the parent association to medical progress and, particularly, its contribution to clean ethical advertising.

Some people complain because it takes representatives of nineteen trades to build a house.

Well over a hundred classes of healers are engaged in building health.

One grouping divides health service by ages: (1) Those who prescribe for conception; (2) for the prenatal; (3) for birth; (4) for "pre-school" children; (5) for school children; (6) for adults; and (7) for the aged.

Another grouping is made upon sex, with its several disarticulated specialties.

A grouping divides patients between the physical, mental, and spiritual. There are several varieties of each of these groups.

Again, there is the division between health promotion, disease prevention, and those who cure disease. And then there is a substantial crowd who deny that there is disease at all.

One division is made upon a geographical basis and one on the topography of the body. The orifices of the body are the basis of another classification of healers, with specialists for each orifice.

Then there are the great divisions based on the systems—nervous, circulatory, etc., and one that goes further and makes a specialty of most individual organs of the body as the heart, kidneys, stomach, skin, etc.

The most noisy of all specialists are those who promote health upon the specificity of their remedies, warranted to cure any and all human infirmities, regardless of diagnosis or symptoms. These range from backbone punchers to controllers of "sex urge."

It's a merry world this, our land of Moronia.

According to the Public Press:

—Doctor C. Renz sends us the following clipping from Mill Valley Record of February 3, 1926:

"Dr. Ralph E. Waldo of San Francisco, in discussing epidemic influenza before the Osteopathic Women's National Association, stated that one hundred fatalities occurred every year from influenza to one from tuberculosis or organic heart and kidney disease, although there existed a simple preventive treatment which if applied would, in his opinion, eradicate influenza.

"He declared the remedy to be the removal of adhesions by internal digital manipulation at the start of the infection, aborting the case and preventing the development of more serious trouble, at the same time curing the chronic catarrh, an almost universal complaint which heretofore has been considered incurable."

—An official excursion into the domain of private morality will always be ridiculous when it is not outrageous.

Morality cannot, with safety to morality itself, be removed from the jurisdiction of the individual conscience and turned over to the immigration inspectors at Ellis Island. It is the subject of personal responsibility to oneself and one's God. If it could be made compulsory it would cease to be meritorious.—San Francisco Bulletin.

—California vital statistics reveal that if a woman has not married by the time she is 85 she will never marry. She may be said to have reached the age of discretion at last.

Chiropractors "Dropped by the Wayside"—According to Fountain Head News, published at Davenport, Iowa, by "J. B. P.," more than 4000 chiropractors' names have been taken off its mailing list since September, 1924; they have, it is said, "dropped by the wayside, closed up shop, taken down their shingles, gone into some other business, turned their diplomas face to the wall. . . . And the bottom has not been reached yet."—Federation Bulletin, February, 1926.

The Banana people are doing some rather clever advertising of bananas as food. They make the common mistake of thinking that an introductory note by a physician insures the co-operation of a great profession.

A new specialty seems to be coming to the front—"Medical Experts for Boards of Health."

These new jobs are to offset criticism being made of non-medical health officers, all of whom, of course, practice medicine.

The significance is obvious; the end-result beyond prophecy.

Hugh Cabot's statement before the American Congress of Physicians that "I believe I am in a position to state that no operation of any kind ever performed on any person has failed to do harm" has been widely used by newspapers to the discredit of the medical profession. Of course, physicians understand what the doctor meant and he explained the statement so that any one who wished might understand, but it's the "headline stuff" that many papers are interested in, and thus the harm in the quoted sentence.

One must be careful in telling the public what is the matter with the medical profession, lest more harm than good is accomplished.

Old age, given on death certificates as a cause of death, has decreased 90 per cent in New York, and to a marked degree elsewhere.

Isn't it likely that this change in diagnosis has helped swell the heart disease statistics?

An important government committee, in reporting upon the sexual offenses against young persons, recommended that where examinations of girls (under 17) are indicated they shall be made by women physicians.

Dr. Logan Clendenning (American Mercury, March), tells well and entertainingly a story of "Drugs," in which both polypharmacists and drug nihilists may find a moral.

The personalities with which physicians deal daily are much influenced by the printed word. Doubtless, thousands have read Clendenning's essay with its sobering appeal to persons of reasonable intelligence. What a story some of the modern biographers could make out of the life of the Countess of Chinchon.

Collis Graham of the National Surety Company, in



a speech recently delivered in Boston, is reported to have said that there have been 85,000 murders in the United States during the last ten years, and there are now 135,000 murderers alive and moving freely about the country today, also that there are more than 300,000 persons in the United States subsisting by crime alone. He predicted that several thousand murders will be committed during the coming year.

Two bills have been introduced in the Massachusetts Legislature, designed to restrict the activities of full-time employes of the state entirely to the work to which such persons have been appointed. This means that even professional employes of the state may not enter upon any gainful occupations outside the service. Whether this is aimed at any one official or is merely a general rule designed to secure more valuable service is not known.

#### California, Nevada, and Utah Doctors Publish Elsewhere:

[Note—Members of the California, Nevada, and Utah Medical Associations are invited to supply the editor with reprints or marked copies of magazines containing their articles or very brief abstracts. All that we receive will be noted regularly in this space.—Editor.]

—Franklin R. Nuzum, Santa Barbara, and Horace J. Hagen, Spontaneous Rupture of the Heart, *Am. J. M. Sc.* (February), 1926.

—P. K. Gilman, and W. E. Kay, San Francisco, Total Thyroidectomy in Thyrotoxicosis of the Exophthalmic Type—A Preliminary Report, *Am. J. M. Sc.* (February), 1926. They conclude:

"1. In selected cases at least, a total thyroidectomy is indicated. For all cases requiring operation a much larger amount of thyroid gland should be removed than is at present usually done, as we believe the entire gland is diseased and normal should be substituted.

"2. The post-operative reaction appears to be inversely proportionate to the amount of gland removed. This apparently applies likewise to the period of convalescence.

"3. It is not difficult in cases of total thyroidectomy to maintain a proper thyroid balance with a thyroid preparation, if regulated from time to time by basal metabolic determinations. A number of these patients are able to

determine subjectively the amount of thyroid extract they require.

"4. In seemingly hopeless cases of exophthalmic goiter the results of total thyroidectomy have been most gratifying. The patients, after long periods of complete invalidism, have resumed their usual occupations and enjoy good health. While we have confined total thyroidectomy, for the most part, to those patients who were seemingly hopeless and had been invalids for long periods of time, we feel that the procedure may be extended to embrace less severe cases. We feel this because: (1) The entire gland is diseased; (2) the amount to be removed is indeterminate and the subsequent action of the amounts of gland remaining is likewise indeterminate.

"5. We realize the number of cases upon which the report is based is small. However, the uniformly good results appear to warrant this preliminary communication."

—Douglas W. Montgomery, M. D., and George D. Culver, M. D., San Francisco, An Instance of Unusual Sensitiveness to Resorcin, *West. M. Times* (February), 1926.

—H. W. Mills, San Bernardino, California, The Surgical Treatment of Echinococcosis, *M. J. and Record* (October 21), 1925.

—A. H. Aland, Ogden, Utah, Etiology and Pathology of Phlyctenular Keratoconjunctivitis, *Am. L. Ophth.* (December, 1925), Vol. 8, No. 12.

—Miley B. Wesson, San Francisco, The Treatment of Traumatic Rupture of the Kidney, *Ann. Surg.* (February), 1926.

—Roland P. Seitz, San Francisco, Extreme Leukocytoses in Pertussis, *Am. H. Dis. Child.* (November), 1925.

—Edward S. Pomeroy, Salt Lake City, Utah, Newer Methods in the Treatment of Syphilis, *Urol. and Cutan. Rev.* (February), 1924.

—John W. Shuman, Los Angeles, The Anemias, *M. Times* (March), 1926; Golf Versus Senility, *M. Herald and Physiotherapist*.

Every lawyer is an officer of the court and every doctor should be an officer of public health.



Hotel Oakland, across Lake Merritt  
Headquarters C. M. A., 1926, Annual Session, April 26-May 1, inclusive

## Medical Economics and Public Health

The Prohibition Authorities, in a letter (Bulletin Los Angeles Medical Association), claim they have discovered "many startling conditions" in their investigations of the practice of doctors and druggists.

One of these "startling discoveries" is that "physicians have been careless about diagnosis" and "a vast number of prescriptions are issued without regard to medicinal necessity."

This may be so, but most sick people will still prefer the diagnosis and treatment given by a doctor to that of a revenue agent.

Another "startling discovery": It seems that the city of Long Beach has a local ordinance prohibiting the issuance of liquor on prescriptions. Therefore, the revenue agents, in the discharge of their doctor functions, cannot legally authorize the issuance of a prescription to a *resident of Long Beach, regardless of the location of the physician or the drug store*. Run your mind's eye around that and look at its potentialities.

Local ordinances in Los Angeles City permit a doctor to prescribe eight ounces for his patient. For the rest of the county sixteen ounces is the limit that the patient may have, the doctor prescribe, or the druggist dispense. In other words, a patient may be given *only the amount of medicine allowed by local ordinances of the town of his residence*. Under these interpretations of the law, if a *resident of Long Beach* were ill in a Los Angeles hospital (twenty miles away) and a doctor prescribed any liquor for him, the doctor, the patient, and the druggist who filled the prescription would be subject to arrest. If this Long Beach resident were ill in San Francisco and the doctor prescribed liquor for him, patient, doctor, and druggist would again be law violators. If a citizen of Los Angeles City is ill in Chicago his Illinois doctor may prescribe eight ounces of liquor, but no more, without violating the law. But if the patient's residence is in Los Angeles County, outside of Los Angeles or Long Beach, the Chicago doctor may prescribe sixteen ounces of liquor, but no more, without violating the practice of medicine as it happens to be conducted by law and the regulations of revenue agents.

All of which makes us think of the kitten and the ball of yarn.

"The functions of government cease with the protection of life and property and the enforcement of contract."

How far we have gone since any statesman could seriously propose these as the limits of government powers!

Now government can do, and does do, almost anything. It teaches the farmer to farm and the housewife to cook; it heaps up statistics, and it card-indexes the expectant mother; it fixes railroad fares and the length of bed sheets.

A contemporary, The National Spectator, printed the other day a touching instance of government omniscience and efficiency. The incident was related in an article describing the Children's Bureau of the Department of Labor. Not long ago, it seems, a messenger boy dashed—if messenger boys do dash—into the Children's Bureau with a telegram which asked: "Shall I give my child castor oil?"

Was the bureau daunted? Not for a moment! The message swiftly passed from hand to hand; from chief to deputy chief, from director to associate director, until it reached a wise woman in the Division of Maternity and Infant Hygiene, who promptly advised the worrying mother whether she should or shouldn't.

A wise parental government which stands ready to advise and regulate our every activity. Its ready wisdom is at hand on any subject from the alimentary canal to the Panama Canal—from colon to Colon.—National Business (March).

Dodge County (Nebraska) Medical Society has an agreement with the county authorities by which the medical society takes charge of medical work for the poor

for \$1000 per month. Even more interesting, the thousand dollars a month is used to promote public health work, while the doctors who do the work receive nothing.

There is food for reflection in this item.

Dr. Ferrell's address before the American Public Health Association some months ago stirred up quite a hornet's nest.

It is not clear at this distance whether Dr. Ferrell, in promoting the interests of non-medical public health officers, made an unfortunate remark or prematurely exploded the bomb, the existence of which has been apparent to those who observed the trend of the times for some years.

Surely, the vast interests who are engaged in preparing non-medical people for public health service must find something for their graduates to do.

"Radical Propaganda under the guise of 'welfare' legislation is so alarmingly on the increase through federal centralization," relates Marian Bruce Clark (Dearborn Independent), "that the underlying motive must be exposed in all its nakedness to millions of American citizens who pay excessive taxes for the countless boards, commissions, 'special agencies,' and other bureaus existing solely for the purpose of socialistic control. There is a vast difference between constructive benevolence and communistic restraint; between industrial welfare and radical demands; between charity and peonage. Year after year the professional socialistic uplifter succeeds in piling up laws, in amending laws, and in obstructing laws, and by each succeeding step approaching nearer to the goal of the conscription of human rights.

We find the program thus arranged:

First. The "serving-without-salary" board or commission.

Second. State maintenance.

Third. The separate bureau or board.

Fourth. Centralization through federal bureaucratic control.

If such a program were to end with exorbitant taxes, coercion, and the breaking down of constitutional government, it would be bad enough, but it goes far deeper—it imposes a condition in which no man is master of his home because of the constant supervision of Government agents, it creates a nation of beggars, slackers, and irresponsibles who are taught to look to the Government for their every need. Teaching people to be dependent on the Government is one of the most insidious methods of destroying national morale.

The ultimate object of centralized federal control is socialistic.

The objective of socialism is communism.

The objective of communism is nationalization.

And the goal of nationalization is Sovietism.

Federal extension of power over our public utilities, our women, our children, and our private property rights through the misleading 'separate agency' plan leads to the establishment of bureaucratic boards, commissions, and other agencies that interpret their own laws, promulgate their own rules—often inconsistent with law—and administer their own finances, present the ever-increasing problem of the invasion of constitutional rights and the encroachment upon the prerogatives of private property and citizenship.

And when defeated in one corner these same people run to another corner and try to force the rejected thing on the United States, under guise of a local District of Columbia Act, it is time to call attention to it."

Platte County, Nebraska, is trying out an experiment by paying for medical services to the poor on an agreed upon fee basis, rather than have salaried doctors do the work.

This is not a new idea, but its potentialities are great.

The California Board of Medical Examiners is rendering the public a highly commendable service in their efforts to induce the San Francisco Telephone Company to make that part of the directory listing "physicians and surgeons" contain more information and less of the mis-



information which has heretofore been an outstanding feature of that publication.

The listings under "physicians and surgeons" of the November, 1925, issue of this so-called directory contains over thirty names that, speaking generously, should not be there.

The publication of this list and the reasons why they should not be included would make interesting reading, but in view of the fact that the Telephone Company at last is showing an inclination to make this department of their "classified directory" a little more accurately informative, we will withhold further comment for the present.

A physician who is capable of making health examinations in an efficient manner, and who tells his patients that he is ready to give this service, will never be charged with commercialism by any individual with the least spark of intelligence or enlightened self-interest. The American Medical Association has given its official sanction to this method of introducing periodic examinations, and has decided that it is in accord with the principles of medical ethics.

In educational literature addressed to the laity, organized medicine should point out the economic advantage of paying to the health examiner a fee commensurate with the value of his services.—*Atlantic Medical Journal*, February, 1926.

**New Health Officer**—W. P. Byron has been appointed Health Officer of Lemoore, Kings County, to succeed W. F. Edmonds.

Both are licensed to practice medicine and surgery in California, and are members of the California Medical Association.

Fred R. De Lappe of Modesto has been appointed County Physician and County Health Officer of Stanislaus County to succeed B. F. Surryhne. They are both members of the California Medical Association, and licensed to practice medicine and surgery in California.

The Michigan State Medical Society is discussing the question of increasing the number of nurses with limited training who will be available for the less serious illnesses, and the recommendation has been made, through a committee, that it would be advantageous to adopt methods for enlarging the number of such nurses.—*Journal Indiana Medical Association*.

For the first thirty-five days of the present year 443 cases of smallpox with 43 known deaths have been reported to the California State Board of Health.

Becton, Dickinson & Co. have issued an interesting pamphlet on the standardizing and care of hypodermic syringes, which contains valuable information.

With the increasing use of syringes in diagnosis and treatment, the selection, use and care of syringes and needles has increasing importance.

"Needles," according to this pamphlet, "are made from seamless high carbon steel, also from the non-rusting metals, such as gold, nickeloid, and platinum-iridium. As to the relative merits of these metals, it is largely dependent upon the purpose for which they are to be used.

"Needles made of high carbon steel and properly tempered will take a keener cutting edge than any other metal. They also possess greater strength and stand up better in use. That is why most physicians prefer them.

"Platinum-iridium needles, of 70 per cent platinum and 30 per cent iridium, such as we make, are quite hard, hold their points well and will not corrode or lose temper in the flame, provided they are not heated beyond a dull red color. They are also unaffected by chemicals. Platinum-iridium needles may be resharpened as often as is necessary, and if used with proper care will give good service.

"Gold and nickeloid needles are rustless and non-corrosive for most uses. They must, however, be sterilized by boiling, as they will not stand the flame; the metal being slightly softer than steel or platinum-iridium, the points are more easily dulled.

"Care of Hypodermic Needles—After using steel needles, they should be rinsed in alcohol or ether and

dried, either with compressed air or by the use of the B-D Brunet needle drier. A wire dipped in oil or vaseline should then be inserted. Steel needles treated in this way will last much longer and will not rust.

"When using platinum-iridium needles, the following caution should be observed: When sterilizing in flame, heat to a dull red, which is sufficient to kill any germ life. Long continued excessive heat renders the needles brittle. Avoid lateral pressure as far as possible while introducing, as bending back and forth soon weakens the walls of the needle and causes it to break or leak.

"Frequent honing of steel, platinum-iridium, gold, and nickeloid needles on an oilstone will keep the points smooth and increase their satisfactory usefulness."

The announcements of this company are found monthly in our advertising pages. See index of advertisers.

In its essence a bill now before the New York legislature "provides councils of medical men to whom the medical phases of disputed cases shall be referred, rather than to laymen who have not the knowledge and training to discern the wheat from the chaff in medical testimony. It is no more logical to refer medical points to a lawyer than law points to a physician." "Since Assemblyman Miller is a recognized authority on the Workmen's Compensation Law," says the *New York State Journal of Medicine*, editorially, "and consulted the chairmen of two committees of the Medical Society of the State of New York, there is a good prospect that the bill will pass; and if it does, there will be a minimum of disputes over doctors' bills for treating injured workmen."

Certain improvements are being made in some of the silver compounds, with the object of avoiding the irritating or staining features of the older silver compounds.

Neo-Silvol, a combination of silver iodide with a gelatinous protein, has been made impervious to the action of sunlight, so that its solutions (or suspensions) do not turn dark on exposure. Thus the staining effect of the silver is avoided. Bacteriologic tests, according to the manufacturers, Parke, Davis & Co., show that the germicidal activity of the new silver preparation is at least equal to that of pure carbolic acid; moreover, that, whatever the concentration of the solution, inflamed tissues are not irritated by its application.

The rumor that the R. L. Scherer Company is going out of business in San Francisco is unfounded. They have represented the Wappler Electric Company for over twelve years in this territory, and they expect to continue to do so, the Los Angeles store covering the southern part of the state and the San Francisco store the northern, as will be seen by their announcements each month in our advertising pages.

The Child Labor Amendment again—this time disguised in sheep's clothing as a District of Columbia welfare act. Professional friends of the child, well paid and well organized, are again striving for paternalistic and socialistic legislation. An apparently innocuous local bill that has dangerous national possibilities.—*Dearborn Independent*.

**Golfers Rally for Trip to Southland Courses**—The Golfers' Special provided for physicians attending the San Francisco Session in 1923 struck a most responsive chord. It will no doubt be pleasing news to all those with the golfing urge to learn that a similar train is being provided for the journey to Dallas. This train will leave Chicago, Sunday, April 11, and will provide six days of golf at famous Southern clubs. The general plan is to travel by night and have the days free for golfing and sight-seeing. Wives and children of physicians are welcomed on this trip, and special entertainment in the way of automobile drives, sight-seeing journeys, surf bathing, and oyster roasts will be provided. The train is run under the auspices of the Southern Pacific. For details, write to Dr. F. C. Warnshuis, Grand Rapids, Michigan.—*Journal A. M. A.*, March 6, 1926.

Among those enterprises which depend for success on implicit faith are love, democracy and hash.—*Detroit News*.

## California Medical Association

EDWARD N. EWER, M. D., Oakland.....President  
 W. T. McARTHUR, M. D.....President-Elect  
 EMMA W. POPE, M. D., San Francisco.....  
 .....Secretary and Associate Editor for California

### ALAMEDA COUNTY

Alameda County Medical Association (reported by Pauline S. Nusbaumer, secretary)—The regular monthly meeting of the association was called to order by the president, J. K. Hamilton, February 15, at 8:15 p. m.

C. O. Sappington, in his paper "Industrial Lead Poisoning," said: Industrial lead poisoning furnishes over half the cases of industrial poisoning today, and is the cause of the highest rate of insurance when based on a comparison with other trades where there is no lead hazard.

From the etiologic standpoint, certain trades are known to contribute heavily to the incidence of lead poisoning. Among these occupations may be mentioned painting, printing, pottery work, white lead, rubber, brass founding, plumbing, lead burning, lead moulding and lead smelting and refining. One hundred years ago, Tanquerel des Planches called attention to a very important fact when he said: "All the characteristic traits of the primary effects of plumbism may be quickly observed in workmen who are habitually in an atmosphere of lead dust and vapors. . . . None of the primary effects are found among workmen who handle lead in a fixed state."

All lead compounds should be considered injurious. The dangerous forms are dust and fumes. The ports of entry to the body are the respiratory system, the gastrointestinal tract, and the skin, named in order of their relative importance. There is no dangerous amount of lead; any amount may cause trouble on account of such a difference in personal susceptibility. The insidious and cumulative character of the behavior of lead in the human body is an important consideration.

The diagnosis of lead poisoning is not difficult, but it is all too often not made when it should be. The United States Public Health service has laid down definite standards to be used as a guide. Speaking of these standards, Dr. C. K. Drinker has recently said: "The conditions set down as permitting a positive diagnosis of lead poisoning possess a healthy degree of stringency too often unobserved by physicians." The diagnosis really rests upon three principles, viz., proof of exposure, the presence of toxic effects, and chemical proof that lead has entered the body.

Aub and his associates have recently published a monograph on lead poisoning which is the result of three years of clinical and experimental research carried on at the Harvard School of Public Health and the Massachusetts General Hospital. These men have changed our ideas, with reference to the behavior of lead within the human body. They have developed efficient methods, both for the quantitative and qualitative detection of lead in specimens of human excreta. They have shown that lead is stored mainly in the compact portions of the large bones; that thus stored it is very sensitive to changes in the acid-base equilibrium of the body, and it may be liberated during an acid condition, producing acute "toxic episodes"; that there is an analogy between the metabolism of lead and calcium; that "deleading" is very difficult and may be impossible, and that acids, acid-forming salts and alkalis definitely increase the excretion of lead to a greater extent than either potassium iodide or magnesium sulphate.

The treatment of this industrial malady is based upon our new knowledge concerning lead storage and excretion. A positive calcium balance favors the storage of lead in the bones; a negative balance tends to increase the rate of excretion. In an acute attack, if we wish to facilitate the storage of lead, the diet should contain an excess of calcium (one quart of milk and 2 grams of calcium lactate taken daily will adequately fulfill this requirement). Deleading is difficult and is probably impossible in toto, but may be accomplished by a low cal-

cium diet, used in conjunction with weak organic acids or alkalis.

The prevention of industrial lead poisoning becomes a matter of the observance of certain principles which have been well enunciated by R. M. Hutton of the Provincial Board of Health of Ontario, Canada. These principles may be thus named: Use of substitutes for lead; prevention of formation of dust and fumes; special protection of workers; medical supervision; personal cleanliness; proper personal habits; education of employees.

Industrial lead poisoning constitutes a major industrial and public health problem, because of the wide usage of lead compounds and the carelessness of both employers and workmen. Prevention will be possible only through the education of industrial executives and the combined co-operation of employer, workmen, and plant medical departments.

Hobart Rogers spoke on "Practical Aspects of Cardiology." Dr. Rogers feels that in the history of cardiac cases sufficient attention is not usually paid to attacks of a transient character, and that the frequent association of goiter with such attacks is too frequently overlooked. In the special examination of cardiac cases the practical value of the electrocardiograph and the fluoroscope is not sufficiently appreciated. The electrocardiograph does not assist in the study of young patients with valvular disease, but is of value in all cases of arrhythmia and tachycardia, and in all cases of any type of heart disease occurring in patients past middle life. The fluoroscopic examination reveals the size and character of pulsation of all the various chambers of the heart separately, and is of major importance in all cases. Special conditions requiring careful differentiation are paroxysmal tachycardia, paroxysmal fibrillation, paroxysmal flutter, angina pectoris, and coronary occlusion. The recognition of the paroxysmal disorders of rate is especially important, because they are readily amenable to treatment and while untreated disturb the patient and subjects him to the danger of embolism. The most common error in the treatment of cardiac cases is insufficient dosage of digitalis. Quinidine is of great value in the paroxysmal disorders of rate, and in selected cases of the prolonged type of fibrillation or flutter. This paper was illustrated with lantern slides, and was concluded by the presentation of cases of aneurysm, flutter, and paroxysmal tachycardia of ventricular origin, which cases illustrated points developed in the paper.

Following the conclusion of the program, the business of the evening was transacted and light refreshments served.

The annual banquet of the association was held on Thursday evening, February 18. The president, J. K. Hamilton, gave a brief address of welcome, and an entertaining program ensued. The speaker of the evening was Mr. Harry Todd. Mr. Todd's subject was "Washington and the Constitution."

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### CONTRA COSTA COUNTY

Contra Costa County Society (reported by S. N. Weil, secretary)—The monthly meeting of the Contra Costa County Medical Society was held Saturday evening, February 27, 1926, at the offices of Dr. Keser of Richmond.

Dr. Victor Vecki of San Francisco, a delegate of the A. M. A., spoke briefly but pointedly, urging the doctors of smaller communities to attend more seriously to their civic duties. A lively and beneficial discussion followed.

The main speaker of the evening was Dr. Ed N. Ewer of Oakland. He very clearly outlined the conservative treatment of eclampsia, furnishing reports that this treatment is followed by the least rate of mortality of any treatment. A vote of thanks was tendered Dr. Ewer. Dr. M. Keser and Miss Agnes Driscoll of the Cottage Hospital of Richmond were joint hostesses, and served a delightful chicken supper. Music was enjoyed over the radio.

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### HUMBOLDT COUNTY

Humboldt County Medical Society (reported by Lawrence A. Wing, secretary)—The Humboldt County Medical Society met at Eureka, February 23, in the St. Joseph's Hospital. We had a good attendance, and an



excellent discussion followed the paper of the evening, "The Treatment of Chronic Empyema," by Joseph F. Walsh.

Our meetings are becoming more interesting. We hope to hold at least ten sessions during the coming year. On March 30, Harold H. Gross will present the paper of the evening.



### ORANGE COUNTY

**Orange County Medical Association** (reported by D. R. Ball, secretary)—The annual banquet of the Orange County Medical Association was held at the Santa Ana Country Club the evening of January 5. Sixty-six members and guests were present. An enjoyable program of musical numbers was provided. A special feature was the presentation in costume of a number of Spanish dances. C. D. Ball, officiating as toastmaster, called for speeches from H. D. Newkirk, retiring president; R. A. Cushman, Mrs. Robert B. Charles, and Attorney H. C. Head, all of whom responded in a very entertaining manner. Officers for 1926 were installed as follows: President, Dr. Bessie S. Martell; Vice-President, Dr. D. C. Cowles; Secretary-Treasurer, Dr. D. R. Ball. Delegates: Drs. R. A. Cushman and H. E. Zaiser. Librarian, Dr. C. D. Ball. Councilors: Drs. F. E. Coulter, John Wehrly, and G. M. Tralle. The meeting was adjourned at a late hour, and all departed feeling that the evening had been most worth while.

The February meeting was held at Ketner's Cafe in Santa Ana the evening of the 2d. Dr. W. H. Kiger, Councilor for the Second District, was present and we enjoyed very much the opportunity of becoming better acquainted with our representative in the California Medical Association. Dr. George Piness of Los Angeles was the speaker of the evening, talking on "Allergy—Its Diagnosis and Treatment." He discussed hayfever, asthma, urticaria, eczema, angioneurotic edema, and certain types of gastro-intestinal upsets. He emphasized the importance of specific diagnosis, with the elimination of or desensitization against the offending protein. He described his own methods as employed, both in large clinic and private practices. A lively discussion resulted, following which refreshments were served, and the meeting adjourned.

The Santa Ana Clinical Society has held two interesting meetings of late. At the December meeting Dr. H. O. Barnes of Los Angeles spoke on certain phases of cosmetic medicine and surgery. At the January meeting Dr. W. H. Daniel of Los Angeles spoke on the diagnosis and treatment of rectal diseases. The talks on both of these limited specialties were instructive and contained much that was new to most of us.

Officers for the new year were installed at the latter meeting as follows: President, Rowland P. Yeagle; Vice-President, Willard C. Dubois; Secretary-Treasurer, John D. Ball. Another successful year is anticipated for the society.



### SACRAMENTO COUNTY

**Sacramento Society for Medical Improvement** (reported by Bert S. Thomas, secretary)—The regular February meeting was held in the Gold Room of the Sacramento Hotel on the 16th. Fifty-six attended. The minutes of the January meeting were read and approved.

No case reports, so the meeting was immediately turned over to J. B. Harris, who spoke on "The Influence of Edinburgh Upon Medicine and Surgery." Harris first took us for a trip through Scotland. This delightful travelogue was pictured by many photographs taken by the speaker. Nothing was overlooked; the hills, the rivers, the dotted islands, the outstanding historical points in Scottish history, the physicians he met and their typical methods of receiving and entertaining—all were covered.

Then the city of Edinburgh itself. Its crags and castles, its clock of flowers, the massive cannon protecting the old royal palace were screened in colors.

Medicine and surgery of Scotland was reviewed chronologically. Harris reviewed the work of each outstanding

department head of the University of Edinburgh to the present day.

**Applications**—After the second reading of the application of Frank P. Topping, a vote showed his unanimous election to our society. There was a second reading of the application of James A. Warburton, but the vote was postponed until the necessary report was obtained from the State Society.

The Board of Directors reported that a clinic is planned at the County Hospital for April. It was also reported that after two years of a Red Cross Children's Health Clinic, this organization was now ready to pass this work to the care of the city.

**Communications** were received from C. B. Pinkham, secretary of the State Board of Medical Examiners, asking for information on three people who are practicing medicine in this vicinity, none of whom has authority to practice under the Medical Act of this state. Information was forthcoming on all of them. It will be forwarded to the secretary.

From Anna M. Loughridge, acknowledging the expression of sympathy of the society for the death of Dr. J. Loughridge, who was called to rest on January 29 of this year.

From the state secretary, stating the action of the state council regarding the graduation of laymen or physicians as doctors of public health, and their appointment as community health physicians. The state's action coincides with the resolution of the Chicago Medical Society which, in brief, states that "All positions of trust pertaining to public health in any community should be held by physicians (M.D.) and not by laymen holding D. P. H. licenses." It was moved by Foster, and seconded by Harris, that the society likewise endorse the sentiments of the Chicago Medical Society, and forward such expression to the American Public Health Association of the state.

The committee on the annual banquet reported progress, announcing that the annual meeting will take the form of a social get-together.

Meeting adjourned to the banquet room.



### SAN DIEGO COUNTY

**San Diego County Medical Society** (reported by Robert Pollock, M.D.)—The County Medical Society and Registered Nurses' Association are co-operating to initiate a physicians' telephone exchange, to be conducted through the Medical Library, giving twenty-four-hour service. Such exchanges have been successfully operated in many cities, and their success is based chiefly on the fact that those for whom the service was planned were willing to co-operate in every way in furthering its success. Unless this be done here in San Diego, those paying their money for service will eventually be disappointed in that service. It requires the united and continuous support of all whose names are listed in the exchange.

John F. Barnhill, M.D., of Indianapolis, professor of surgery of the head and neck, treated the medical society on February 23 to an extremely interesting talk upon the subject of headaches. The doctor enumerated some of the more common types of headaches, describing their causation and proper treatment, and rather cleverly suggested to his audience that greater care in the diagnosis and treatment of this very common complaint would greatly lessen the number of such cases treated by irregulars of various sorts.

To a recent trust fund, known as the Grace Hatch Foundation, for the benefit of orthopedic cases, \$30,000 has been placed at the disposal of the local medical profession for hospitalization and appliances incidental to the treatment of such cases. Maynard C. Harding, M.D., represents the medical profession as one of the board of three trustees responsible for the execution of this trust.

On Tuesday, March 9, the county society dined at the Golden Lion Tavern in honor of their guest of the evening, Harold Brunn, M.D., of San Francisco. After a pleasant social hour, Dr. Brunn entertained his audience with an illustrated talk on surgery of the lungs and pleura. Representing as it does one of the advanced lines in general surgery, what he had to say was listened to with extreme interest by the members of the society. His pictures expressed the best work of the radiographer.

His whole talk tended to show that diseases of the chest are opening up a broader and a more successful field for the skill of the surgeon. Incidentally, the doctor suggested that tuberculosis of the bones and glands, formerly largely relegated to the surgeon, was becoming more and more a legitimate field for the internist, while many conditions of the chest formerly never referred to the surgeon were now being passed to him by the intelligent internist. The speaker made a plea for more prompt and more general consultation between the surgeon and internist on all obscure diseases involving the chest.

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### SAN FRANCISCO COUNTY

**San Francisco County Medical Society** (reported by Thomas A. Kelly, secretary)—During February, 1926, the following meetings were held:

Section on Medicine, Tuesday, February 2—Tuberculosis meningitis—E. W. Twitchell. Tuberculosis of the abdominal lymph glands, of the appendix, and some allied affections—Leo Eloesser. Demonstration of pathological material from tuberculosis of abdominal lymph nodes—Z. E. Bolin.

General Meeting, Tuesday, February 9—Recent European trip of the Society of Clinical Surgery—Emmet Rixford. The plan of the Commission on Medical Education—Ray Lyman Wilbur.

Section on Surgery, Tuesday, February 16—Ankylosing operations of the tuberculous spine. Report of fifty cases—L. W. Ely. The etiology of the post-operative pulmonary abscess—Emile Holman.

Section on Eye, Ear, Nose, and Throat, Tuesday, February 23—Demonstration of cases—Hans Barkan. Keratitis parenchymatosa following trauma—Hans Barkan. Retropharyngeal abscess—R. C. Martin.

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### SAN JOAQUIN COUNTY

**San Joaquin County Medical Society** (reported by Fred J. Conzelmann, secretary)—The stated meeting of the San Joaquin County Medical Society was held Thursday, March 4, 1926, at the headquarters of the Local Health District, 129 South American Street. The meeting was called to order at 8:30 p. m. by the president, H. S. Chapman.

Thirty-one were in attendance. Those present were: Drs. N. P. Barbour, J. W. Barnes, C. B. Benson, E. L. Blackmun, J. F. Blinn, C. A. Broadus, H. S. Chapman, F. J. Conzelmann, A. E. Dart, L. Dozier, F. T. Foard, N. B. Gould, S. Hanson, J. P. Hull, H. E. Kaplan, Grace McCoskey, A. H. McLeish, F. S. Marnell, B. J. Powell, J. J. Sippy, C. V. Thompson, L. E. Tretheway, A. L. Van Meter, G. J. J. Vischi, B. F. Walker, N. E. Williamson, Spencer, Winifred Biethan, and Drs. Wallace Smith, Colonel Edward Munson and Dudley Smith as guests and speakers of the evening.

The minutes of the previous meeting were read and approved.

The scientific program was as follows:

Acute Ear Infections. By Wallace Smith, M.D., San Francisco.

California and the Medical Reserve Corps. By Colonel Edward Munson, United States Army.

Legal Department of California Medical Association. By Dudley Smith, M.D., Oakland, California.

"Acute Ear Infections" was presented by Dr. Wallace Smith, who made a few brief remarks relative to the early reports in medical literature of ear conditions, mentioning writings of Hippocrates, Grissinger, Gradenigo, and Lucae.

Acute ear infections may occur at any age. Look upon the mucous membrane of the throat, pharynx, nose, eustachian tube, middle ear, and mastoid as one. The mucous membrane of these cavities are continuous with each other, and remembering this fact, the spread of infection can easily be understood. The best work in the interest of the patient is done in co-operation with other physicians.

The pathology of the mucous membrane is the same wherever you find it. Pus, wherever located, should be evacuated. Look at things as you find them. Mastoiditis is a grave condition only on account of its neighbor-

hood. The morbid process may start in the middle ear, spread to the mastoid, lead to sinus thrombosis, brain abscesses, or other intracranial complications. There are two kinds of mastoiditis—the cholesteatoma and the thrombotic type. The zygomatic abscess and the Lucae abscess above the ear are rare. The Gasserian ganglion lies near the tip of the petrous portion of the temporal bone, and so extensive may be the morbid process in the ear to extend to the tip of the petrous portion of the bone, and involve the Gasserian ganglion. This not infrequently results in severe pain in the temporal region from the affection of the fifth nerve and paralysis of the sixth or abducens nerve; the symptom complex is called the Gradenigo's syndrome.

A complete paralysis of one side of the face, Bell's palsy, occurs at times in the course of an acute inflammation of the middle ear; there is no necrosis of the bone, and may be no mastoid involvement. Bell's palsy in such a case is due to the extension of the inflammation from the middle ear, without bone disease. Inflammation may spread from the lining membrane of the tympanum to the nerve when the layer of bone which separates the nerve from the tympanic cavity is thin, or the bone may actually be deficient. Bell's palsy in such instances is always temporary. Labyrinthitis is occasionally met with in acute or chronic infection of the middle ear. Of the symptoms, fever is the most important; it may be continued high or continued low, or may be up and down. Secondly, pain is important. The baby cries, the adult complains.

Quite high fevers suggest middle ear disease, pneumonias, pyelitis, and tonsillitis. Inspect the drum—it is not always red, not always bulging. Blood count is not reliable. Pyelitis shows fever long before pus. X-ray may clinch the diagnosis of central pneumonia. Certain conditions simulate mastoiditis, as for example: External otitis, erysipelas of the ear usually mild, and infection of the scalp gland from a comb scratch. In the thrombotic type, with two running ears, or with mastoiditis in each ear, where is the thrombosis? Lateral sinus thrombosis is a well known and dangerous complication of suppuration in the middle ear. It is recognized by distention of the mastoid veins, edema of the mastoid region, and hardness and tenderness of the internal jugular vein.

There may be rigidity of the neck, tinnitus, vertigo, and signs of compression on the vagus. But tying both jugulars is not good for the patient. The manometric studies of Toby and Ayer of the spinal fluid have proved reliable in the cases of complete block, and highly suggestive in the cases of incomplete block; it not only determines the presence of thrombosis, but also indicates which side is involved. Absence of block, as determined by the spinal fluid tests, is of value in the differential diagnosis of sinus thrombosis. The test has its greatest value in cases presenting double mastoiditis, developing symptoms of lateral sinus thrombosis. The treatment of acute ear infections is simple; open the ear drum early.

The subject was discussed by Dr. Barton J. Powell, who emphasized the careful study and treatment of ear diseases; mentioned that earache of children is almost always due to inflammation of the middle ear. Most adults know the character of the pain from the recollection of childhood, as few escape some attack, and the peculiarity of the pain impresses itself on the memory. He said extensive incision is the treatment. Dr. H. E. Kaplan recalled the importance of keeping in mind the continuation of the mucous membrane in all the air spaces, and asked the speaker what value he attached to the blood count and bacteriological examination. Dr. B. F. Walker pointed out that many mastoid operations were necessary because of failure to do early paracentesis, and the proper and correct after-care and treatment of the patient.

In closing, Dr. Wallace Smith stated that he valued the blood and bacteriological examination as a correct procedure, but it contributed nothing to the diagnosis or treatment of the condition. The point made by Dr. Walker regarding after-treatment was well taken. He cited a case which illustrated the situation.

In his talk, "Physicians of California and Medical Reserve," Colonel Munson pointed out the great need of physicians in this organization, and also the advantages



to the physicians who accept such commissions. It is not only a great patriotic service that the physician performs by accepting a commission in the M. O. R. C., but it also has an educational and financial advantage.

The Medical Reserve is the backbone of the possible medical service in time of national emergency. And certainly the profession has every reason to be proud of the record made by the medical officers who forsook their private interests and donned the uniform in the last emergency of that sort. Service is the real ideal of the doctor, in the Army or outside of it.

The resolution, introduced by Dr. Van Meter and seconded by Dr. Powell, "That the San Joaquin County Medical Society resolve to sponsor and endorse the idea of the Medical Reserve Corps, and urge every one of its members to make application for a commission in the Reserve Corps, was carried without a dissenting vote.

Dr. Dudley Smith, councilor of this district, paid a visit to this society, and spoke on the legal department of the California Medical Association, which is known under the name California Medical Society. The premium is \$10 a year, and entitles the member to the best legal representation that the society employs to defend its members who have trouble cases. It carries no insurance. The doctor answered several questions asked relative to the legal department of the California Medical Association.

Dr. B. F. Walker extended an invitation to the society to meet at his ranch for a dinner and social evening at 6:30 Thursday, June 3, 1926. The president accepted the invitation on behalf of the society, and the Program Committee was instructed to make their arrangements accordingly.



### SANTA BARBARA COUNTY

**Santa Barbara County Medical Society** (reported by Alex C. Soper, Jr., M.D., secretary)—The regular meeting was called to order March 8, 1926, at 8:10 p. m. in the staff room of the hospital, twenty-four members, two interns, and Drs. Robert Merrill of Santa Paula and Corneille of Berkeley being present. Dr. Hotchkiss, the president, in the chair.

The minutes of the previous meeting were read, approved, and ordered placed on file. Three new members were unanimously accepted: D. G. Clark, C. Victor Lindsay, and Constantine G. Nicholas. Announcement was made that Victor G. Vecki, M. D., has arranged to address the meeting of April 6.

The principal and only address of the evening was an informal talk on the heart by Alexander Lambert of New York City, who is here on a vacation. Later, the discussion was participated in by Drs. Nuzum, Koefod, Ullmann, Robert Merrill, and Sansum.

### CHANGES IN MEMBERSHIP

**New Members**—Edward M. Taylor, Oakland; Lionel A. Jacoby, Oroville; John W. Bumgarner, Richmond; J. A. Olson, Kerman; Harry L. Jenkins, Allan R. Watson, G. F. Norman, Eureka; Oliver B. Barron, Ferndale; H. W. Comfort, Rio Dell; Hama Markley, Holtville; H. R. McAllister, Taft; G. R. Fortson, Susanville; Samuel G. Ray, R. L. Umezawa, James F. Anderson, M. Biegelman, Benjamin Belove, Ernest O. Boetticher, Guy D. Conover, E. Van Norman Emery, George W. Garner, Adolph M. Muchnic, Philip J. Murphy, Arthur V. Samaniego, George J. Saylin, Joseph B. Stevens, Joseph V. Trainor, Los Angeles; Elliott P. Smart, San Fernando; Edward W. Barton, Alhambra; Thomas N. Rogers, Monrovia; LeRoy O. Schultz, Glendale; W. Proctor Day, San Quentin; Malcolm S. Edgar, San Rafael; Frederick H. Olberg, Fort Bragg; A. E. Kiser, Talmage; Lena G. Miller, George W. Ogden, Imola; Clyde A. Gregory, Sanitarium; George J. Wood, St. Helena; Gordon M. Grundy, Newport Beach; Frank W. Lee, Elk Grove; James D. Bobbitt, San Diego; Robert S. Irvine, Robert E. Allen, Matthew T. Moorehead, Joseph Visalli, Anna M. Flynn, Randolph L. McCalla, San Francisco; Matthew F. Desmond, Burlingame; John B. Manning, Santa Barbara; F. P. Marinovich, Watsonville; Henry E. Meyers, Turlock; Charles H. Griswold, Modesto;

Robert H. Burney, Corning; Louis W. Achenbach, Wilfred S. Clark, Allen H. Peek, Ventura; D. Schuyler Pulford, R. G. Frey, Woodland; Conrad Richter, Balboa Beach.

**Transferred**—George H. Sanderson, from Sacramento County to San Joaquin County.

Charles H. Lowell, from Los Angeles County to Monterey County.

Walter W. Peterson, from Lassen-Plumas County to Alameda County.

Richard C. Burkett, from Orange County to Los Angeles County.

Hugh W. Bell, from Tulare County to Kern County.

M. P. Stansbury, from Solano County to Yolo-Colusa County.

Cecil G. Newbecker, from San Bernardino County to Fresno County.

Carl E. Steen, from Los Angeles County to Orange County.

**Honorary**—John C. Spencer, San Francisco.

**Resigned**—Russell A. Jewett, from San Francisco County.

**Deaths**—Dunlap, Frank H. Died at Brawley, February 16, 1926, age 55. Graduate of the Kansas City Homeopathic Medical College, Missouri, 1894. Licensed in California in 1914. Doctor Dunlap was a member of the Imperial County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Logan, Roscoe Lee. Died at San Francisco, March 7, 1926. Graduate of the California Eclectic Medical College, Los Angeles, 1901, and licensed in California the same year. Doctor Logan was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

McKenzie, Hector Daniel. Died at Oakland, February 18, 1926, age 35. Graduate of the Oakland College of Medicine and Surgery, 1918, and licensed in California the same year. Doctor McKenzie was an affiliate member of the Alameda County Medical Society, the California Medical Association, and the American Medical Association.

Poehner, Adolph Adam. Died at San Francisco, February 18, 1926, age 59. Graduate of the University of Pennsylvania School of Medicine, 1894. Licensed in California in 1896. Doctor Poehner was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

### GEORGE BURBANK SOMERS

1862-1926

On February 20, 1926, Dr. George B. Somers, Clinical Professor of Gynecology and Physician Superintendent of Lane and Stanford Hospitals, died of lethargic encephalitis at his home at Woodside.

Dr. Somers was born in San Francisco on August 4, 1862. He was educated in the schools of this city. After finishing his high school course he went to Harvard, where he received the A. B. degree in 1886. He returned to San Francisco, entered Cooper Medical College and was granted the M. D. degree by this institution in 1888. Following his graduation, he was appointed resident physician of the Southern Pacific Hospital at Sacramento. Here he served until 1891. When he left Sacramento he became chief surgeon of the Emergency hospitals of San Francisco, which position he held until 1895. He soon joined the teaching staff of Cooper Medical College, acting first as demonstrator in anatomy. In 1898 he became adjunct to the Chair of Gynecology under Dr. Clinton Cushing, whom he succeeded as Professor of Gynecology in 1901. As head of the department, Dr. Somers proved to be an excellent teacher and was most successful in the practice of his chosen specialty. With his previous training in anatomy, he was able to add to the advance of our knowledge in this field by independent research along anatomical lines. When Stanford University took over the clinical work of the Cooper Medical College in 1911 he relinquished the headship of the Department of Gynecology, which was merged with that of obstetrics. Still he retained a seat in the new faculty as Clin-



GEORGE BUREANK SOMERS

cal Professor of Gynecology and continued to be interested in his specialty until his death. With the advent of Stanford in the city, the very important position of physician superintendent of the Stanford hospitals had been created, and this office was entrusted to Dr. Somers' care. From that time on his main efforts were directed toward the maintenance and improvement of our hospital service and to the development of our school of nursing.

Dr. Somers was always greatly interested in public affairs. He served as a member of the San Francisco Department of Public Health from December, 1909, to December, 1923, with an intermission in 1910 and 1911, when the members of the Board of Health had been illegally removed from office. During his tenure of office he was chairman of the Hospital Committee for several years. Through his experience in hospital administration he was able to render very important services to the city in this capacity. Through his efforts the Training School for Nurses at the San Francisco Hospital was reorganized along modern lines. Dr. Somers was keenly and unselfishly interested in this work at all times, and his general influence in the Board of Health was always directed toward progress and advancement.

During the last years Dr. Somers had served on some of the most important committees of the Community Chest, and had given freely of his knowledge of business and hospital administration to this great work.

Stanford University owes a great debt of gratitude to Dr. Somers for the work he has done in building up our hospitals. As physician superintendent and secretary of the Clinical Committee, his influence was controlling in many directions. As a member of the Clinical Committee he was not only consulted in regard to hospital administration, but had much to do with the shaping of the general policies of the Medical School. If our hospitals are now well organized we owe this to a very great extent to the indefatigable efforts and to the successful planning of Dr. Somers. It was his administrative ability which has made the new hospital built by the University a model hospital.

Dr. Somers was in many ways especially fitted for the important place which he held in the Medical School. He had an unusually clear view in large affairs. At the

same time he never begrudged time in connection with important detail. He was a natural leader and knew how to assemble about him a force of workers whom he could trust and who had absolute confidence in his judgment. Having been a teacher of medical students, he was naturally interested in the progress of medical education. He saw to it that the clinical opportunities at the hospitals could be utilized by the students and teachers to the fullest extent. He developed the clinical facilities in every possible way and devoted much time to the proper maintenance and constant improvement of the clinical wards. At his suggestion the out-patient department was made an intrinsic part of the hospital organization. In this way the efficiency of its administration was greatly increased.

His greatest work perhaps was done in connection with the School of Nursing. When he took over the superintendency of hospitals this school was small, inadequately housed, and the instruction given—excellent as it was in many respects—was relatively restricted and poorly organized. By patient, constant labor, he gradually built up an institution that the University can be proud of. His far-reaching plan was consummated when the University built the new building, which not only serves as a model home for the pupil nurses, but also contains the classrooms and other equipment which are necessary for their proper instruction. It may be justly said that in the School of Nursing Dr. Somers succeeded in developing an institution of the first rank.

It will be very difficult to find as his successor a man who combines to such an unusual degree a real interest in medical education, in the education of nurses, and in high standards of hospital administration.

Those who have had the good fortune to work with Dr. Somers will always remember him as a man of the most charming personality. With all his gifts, he was simple and unassuming. He gave his best without reserve and without any thought of himself. He was a staunch friend and a man whose judgment and advice could be relied on implicitly.

### THE DALLAS SESSION, A. M. A.

**Railroad Rates to Dallas**—The passenger associations throughout the United States have authorized a rate of one and one-half fares for the benefit of members of the American Medical Association who will attend the Seventy-seventh Annual Session, to be held in Dallas, April 19-23. The Canadian Passenger Association has also authorized these reduced rates from points in Canada east of and including Armstrong, Fort William and Sault Ste. Marie. In order to secure the reduced rates it will be necessary for each member to secure a certificate from the ticket agent when he purchases his ticket to Dallas. The certificate must be certified by the secretary of the American Medical Association. This may be done at the Registration Bureau at the State Fair Grounds in Dallas. The certificate must then be validated by a representative of the railroads who will be on duty near the Registration Bureau. When the certificate is so certified and validated it will entitle its holder to purchase a return ticket to his home, over the same route traveled to Dallas, at one-half fare.

The certificate referred to is not a receipt for money paid for a ticket. Be sure to ask your railroad ticket agent for a certificate when you purchase your ticket to Dallas.

The dates of sale of tickets to Dallas will be: Utah, April 14 to 20; from Arizona, British Columbia, California, Idaho, Nevada, Oregon and Washington, April 13 to 19. Certificates properly certified and validated will be honored for purchasing tickets for the return journey at one-half fare up to and including April 27, but these certificates will not be honored after that date. No refund of fare will be made on account of failure to obtain proper certificate when ticket to Dallas is purchased, nor on account of failure to present validated certificate when purchasing return ticket. The return ticket must be used over the same route as that traveled going to Dallas. Return tickets issued at the reduced rate will not be good on any limited train on which such reduced fare transportation is not honored.

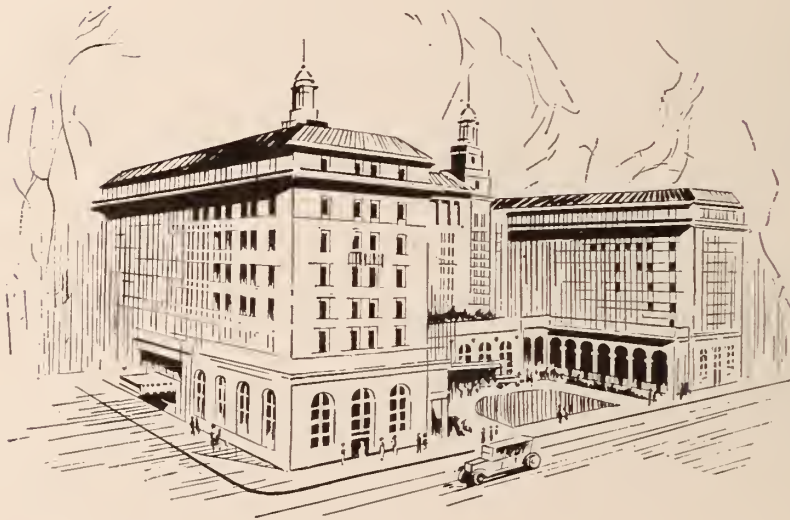


# PROGRAM

THE FIFTY-FIFTH ANNUAL SESSION  
OF THE CALIFORNIA MEDICAL ASSOCIATION TO BE HELD

AT OAKLAND, CALIFORNIA

APRIL 26, 27, 28, 29, 30, MAY 1, 1926



## HOTEL OAKLAND

Thirteenth and Harrison Streets

Headquarters for Meeting of California Medical Association

### OFFICERS AND COMMITTEES, 1926

Edward N. Ewer, Oakland, President.  
William T. McArthur, Los Angeles, President-Elect.  
Joseph Catton, San Francisco, Vice-President.  
Emma W. Pope, San Francisco, Secretary.  
W. E. Musgrave, San Francisco, Editor.  
Hartley F. Peart, San Francisco, General Counsel.  
Hubert T. Morrow, Los Angeles, Assistant General Counsel.  
William H. Barry, Superintendent of Publications.

### COUNCILORS

**First District**—Lyell C. Kinney, San Diego (1927)—San Diego, Riverside, San Bernardino, and Imperial Counties.  
**Second District**—William H. Kiger, Los Angeles (1928)—Los Angeles, Santa Barbara, Ventura, and Orange Counties.

**Third District**—W. H. Bingaman, Salinas (1926)—San Luis Obispo and Monterey Counties.

**Fourth District**—Fred R. DeLappe, Modesto (1928)—Fresno, Kern, Kings, Tuolumne, Merced, Mariposa, Madera, Tulare, and Stanislaus Counties.

**Fifth District**—David A. Beattie, San Jose (1926)—Santa Clara, San Mateo, San Benito, and Santa Cruz Counties.

**Sixth District**—Walter B. Coffey, San Francisco (1926)—San Francisco County.

**Seventh District**—Dudley A. Smith, Oakland (1926)—Alameda, Contra Costa, San Joaquin, and Calaveras Counties.

**Eighth District**—James H. Parkinson, chairman, Sacramento (1928)—Sacramento, Amador, El Dorado, Alpine, Placer, Nevada, Yuba, Sutter, Sierra, Yolo, Butte, Plumas, Lassen, Mono, Inyo, Glenn, Colusa, Tehama, Shasta, Modoc, and Siskiyou Counties.

**Ninth District**—James H. McLeod, Santa Rosa (1926)—Marin, Sonoma, Lake, Mendocino, Solano, Napa, Del Norte, Humboldt, and Trinity Counties.

**Councillors-at-Large**—Robert Peers, Colfax (1928); Rene Bine, San Francisco (1926); George H. Kress, Los Angeles (1926); Harlan Shoemaker, Los Angeles (1926);

Morton R. Gibbons, San Francisco (1927); C. L. Curtiss, Redlands (1926).

### DELEGATES AND ALTERNATES TO A. M. A.

**Delegates**—Victor G. Vecki, San Francisco (1926).  
Hans Lisser, San Francisco (1926).  
Albert Soiland, Los Angeles (1927).  
Robert V. Day, Los Angeles (1927).  
Lemuel P. Adams, Oakland (1927).

**Alternates**—C. Van Zwahlenburg, Riverside (1926).  
William E. Stevens, San Francisco (1926).  
Charles D. Lockwood, Pasadena (1927).  
Robert Pollock, San Diego (1927).  
O. D. Hamlin, Oakland (1927).

### GENERAL HEADQUARTERS, HOTEL OAKLAND

**Meeting Halls**—Hotel Oakland, Thirteenth and Harrison Streets, and Ebell Hall, Fourteenth and Harrison Streets

**Secretary's Office**—Council Room, Hotel Oakland.  
**Registration Desk**—Hotel Parlor.  
**Information Offices**—Registration Desk.  
**Publicity Committee**—Hotel Oakland.  
**Council Room**—Hotel Oakland, Room 201.

### COMMITTEES

**Committee on Scientific Program**—Emma W. Pope, chairman; Lemuel P. Adams, Oakland (1926); F. M. Pottinger, Monrovia (1927); Joseph Catton, San Francisco (1928); J. Marion Read (1928).

**Committee on Arrangements and Entertainment**—Clarence A. DePuy, chairman; Lemuel P. Adams, Mark L. Emerson, J. K. Hamilton, H. B. Mehrmann, Pauline Nusbaumer, G. G. Reinle, W. H. Strietmann.

**Executive Committee**—Rene Bine, chairman; Morton Gibbons, acting chairman; Edward N. Ewer, William T. McArthur, Joseph Catton, James H. Parkinson, Emma W. Pope, W. E. Musgrave, Hartley F. Peart.

**Auditing Committee**—Rene Bine, chairman; Morton R. Gibbons.

**Publicity for 1926 State Meeting**—Celestine J. Sullivan.

# DIAGRAM OF MEETINGS

		Ball Room	Ebell Club	Ebell Club	West Room	Rose Room	Room 101	South Room	Blue Room	Room 201	
Tuesday April 27	8-10									Council	
Wednesday April 28	10-12:30	General Session	Report of Committees and Presidential Addresses							Council	
	2-4:30		General Medicine	General Surgery							
	2:30-5				Dermatology	Tech Spec. Med. Soc. Workers	Urology	Neuropsychiatry	Anesthesiology		
	6:00	Optional Medical Defense Dinner—Mr. M. G. Gallaher, Fresno, Speaker (Main Dining Room)									
	8-10	House of Delegates									
Thursday April 29	10-12:30	General Session	Invited Guests							Council	
	2-4:30		General Medicine	Industrial Medicine							
	2:30-5				Tech. Spec. Physiotherapists	Eye, Ear, Nose and Throat	Urology	Gynecology	Pac. Coast Anesthetists		
	7:00	Dinner and Entertainment									
Friday April 30	10-12:30	General Session	Medical Economics, Education, Public Health and Hospitals							Council	
	12:30-2		Luncheon, County Officers and Councilors (Blue Room)								
	2-4:30			Pediatrics	General Surgery						
	2:30-5				Syphilology	Eye, Ear, Nose and Throat	Western Branch American Urological Section	Neuropsychiatry	Pathology		
	8-10	House of Delegates									
Saturday May 1	10-12:30		General Medicine	General Surgery						Council	
	12:30-2	Luncheon,	Program Committee (Blue Room)								
	2:30-5					Dermatology	Eye, Ear, Nose and Throat	Urology	Obstetrics		

Note: Owing to the fact that the Dining Rooms on the mezzanine floor are being used for Section Rooms, the meeting hour for Sections in 101 and in the West, South, Rose and Blue Rooms will be 2:30 p. m.

## GENERAL OUTLINE OF THE MEETINGS

Pre-convention clinics will be held at Fabiola, Merritt, and Providence Hospitals on the morning of Monday, April 26, and Tuesday, April 27. Members are urged to attend these clinics, which are to be conducted by prominent invited guests. The afternoons of these days will be devoted to golf tournaments. Section meetings will be held on all other afternoons of the week. There will be four sessions of the convention proper on Wednesday, Thursday, Friday, and Saturday.

Uniform hours for all meetings are provided for 10 a. m. to 12:30 p. m., 2:30 to 5 p. m., and 8 to 10 p. m.

The time of each meeting is shown in the diagram.

**General Sessions**—Three general sessions open to members and guests will be held in the Hotel Ball Room on Wednesday, Thursday, and Friday mornings. On Saturday morning, the General Surgery and General Medicine Sections will hold Section meetings in Ebell Hall.

**Section on Medical Economics, Education, Public Health and Hospitals**—This meeting is held under the auspices of the League for the Conservation of Public Health on Friday morning.

**The Medical Society of the State of California (Optional Defense Group)**—Mr. Gallaher of Fresno will speak at a dinner Wednesday evening at 6 o'clock. All members of the California Medical Association and guests are urged to attend this dinner.

The following sections will hold meetings:

Anesthesiology.  
Dermatology and Syphilology.  
Eye, Ear, Nose, and Throat.  
General Medicine.  
General Surgery.  
Industrial Medicine and Surgery.  
Neuropsychiatry.  
Obstetrics and Gynecology.  
Pathology and Bacteriology.  
Pediatrics.  
Urology.

## Technical Specialties:

- California Association of Medical Social Workers.
- California Association of Physiotherapists.

## Council Meetings

- First Meeting—Tuesday, April 27, at 8 p. m.  
Second Meeting—Wednesday, April 28, at 2 p. m.  
Third Meeting—Thursday, April 29, at 2 p. m.  
Fourth Meeting—Friday, April 30, at 2 p. m.  
Fifth Meeting—Saturday, May 1, at 2 p. m.

## Meeting of the Council With the Presidents and Secretaries of Constituent Societies

All members of the Council and all presidents and secretaries and assistant secretaries of constituent societies are requested to be present at a luncheon to be held in the Blue Room, mezzanine floor, Hotel Oakland, on Friday, April 30, at 12:30.

Please make your reservation for this luncheon at the Registration Desk as early as possible.

The Program Committee request all Section Secretaries and Chairmen to make reservation at the registration desk for a luncheon to be held Saturday, May 1, in the Blue Room, Mezzanine Floor, at 12:30. Councilors and officers of the C. M. A. are also invited.

## HOUSE OF DELEGATES

### Membership

**Councilors**—First District, Lyell C. Kinney (1927); Second District, William H. Kiger (1928); Third District, W. H. Bingaman (1926); Fourth District, Fred R. De Lappe (1928); Fifth District, David A. Beattie (1926); Sixth District, W. B. Coffey (1926); Seventh District, Dudley A. Smith (1926); Eighth District, James H. Parkinson (1928); Ninth District, James H. McLeod (1926).

**Councilors-at-Large**—Robert Peers (1928), Rene Bine (1926), George H. Kress (1926), Harlan Shoemaker (1926), Morton R. Gibbons (1927), C. L. Curtiss (1926).

**Ex-Officio**—President Edward N. Ewer, President-Elect William T. McArthur, Vice-President Joseph Catton.



## DELEGATES

## ALTERNATES

## DELEGATES

## ALTERNATES

Alameda County (7)	
Daniel Crosby	F. H. Bowles
S. V. Irwin	C. T. Devine
C. L. McVey	R. A. Glenn
A. M. Meads	Channing Hall
H. B. Mehrmann	George McClure
C. H. Miller	W. B. Palamoutian
Pauline S. Nusbaumer	R. T. Sutherland
Butte County (1)	
Percy L. Hamilton	Newton T. Enloe
Contra Costa County (1)	
J. M. McCullough	M. Deninger-Keser
Fresno County (2)	
Thomas F. Madden	Clinton D. Collins
Harry J. Craycroft	William G. Milholland
Glenn County (1)	
Etta S. Lund	
Humboldt County (1)	
William J. Quinn	John N. Chain
Imperial County (1)	
Eugene Le Baron	C. S. Brooks or W. W. Apple
Kern County (1)	
F. A. Hamlin	Frank J. Gundry
Lassen-Plumas County (1)	
S. M. Sproat	B. J. Lasswell
Los Angeles County (29)	
John D. Gillis	Homer S. Wilson
George Piness	L. S. Welbourn
E. E. Kelly	A. E. W. Yale
J. G. Mackey	David Thomson
Percy T. Magan	E. D. Ward
V. R. Mason	W. H. Gilbert
A. W. Moore	Eleanor Seymour
A. T. Newcomb	Olga McNeile
Scott D. Gleeten	Philip Stephens
James F. Percy	Thomas Moffitt
Leroy B. Sherry	Joseph K. Swindt
C. P. Thomas	Foster K. Collins
E. C. Moore	Russell Sands
E. O. Palmer	G. A. Laubersheimer
W. B. Bowman	C. W. Cook
Harlan Shoemaker	A. E. Belt
Michael Creamer	Walter F. Wessels
Lyle G. McNeile	E. C. Fishbaugh
William Duffield	R. S. Cummings
John V. Barrow	Charles Salisbury
Robert V. Day	W. H. Bucher
C. G. Toland	T. J. Orbison
Albert Solland	William H. Daniels
Joseph M. King	Walter A. Bayley
W. W. Hutchinson	Phil Boller
Granville MacGowan	A. C. Germann
L. D. Remington	W. A. Swim
C. E. Phillips	J. C. Horton
George L. Cole	H. M. Voorhees
Marin County (1)	
H. O. Hund	C. A. De Lancey
Mendocino County (1)	
Raymond Babcock	Homer H. Wolfe
Merced County (1)	
J. L. Mudd	W. C. Cotton
Monterey County (1)	
Rollin Reeves	W. C. Yates
Napa County (1)	
Robert Crees	J. J. France
Orange County (2)	
R. A. Cushman	D. R. Ball
Harry E. Zaiser	D. C. Cowles
Placer County (1)	
H. N. Miner	R. H. Eveleth
Riverside County (1)	
C. R. Geith	T. A. Card
Sacramento County (2)	
J. B. Harris	Bert Thomas
F. N. Scatena	George J. Hall
San Benito County (1)	
R. W. O'Bannon	E. E. McKay
San Bernardino County (2)	
A. N. Donaldson	K. L. Dole
E. L. Tisinger	F. F. Abbott
San Diego County (4)	
John J. Yates	T. O. Burger
George B. Worthington	E. F. Chamberlain
Mott H. Arnold	D. R. Higbee
Martha Welpton	Lillian B. Mahan
San Francisco County (16)	
Edmund Butler	T. E. Bailly
W. E. Chamberlain	G. M. Barrett
W. E. P. Clark	Leroy Brooks
W. E. Coffey	Lloyd Bryan
W. S. Franklin	J. F. Cowan
J. H. Graves	S. H. Hurwitz

T. H. Kelly	E. F. Glaser
E. S. Kilgore	A. S. Keenan
W. P. Lucas	Elizabeth Keys
A. C. Reed	Hans Lisser
F. H. Rodenbaugh	Harvard McNaught
H. A. L. Ryfkogel	A. S. Musante
I. W. Thorne	R. R. Newell
V. G. Vecki	R. G. Flood
J. H. Woolsey	O. F. Westerfeld
K. L. Schaupp	C. F. Gelston
San Joaquin County (2)	
R. T. McGurk	B. J. Powell
F. J. Conzelmann	J. J. Sippy
San Luis Obispo County (1)	
Gifford L. Sobey	
San Mateo County (1)	
Walter C. Chidester	William H. Murphy
Santa Barbara County (1)	
Henry J. Ullmann	Frank R. Nuzum
Santa Clara County (2)	
E. P. Cook	H. C. Brown
John H. Shephard	E. M. Miller
Santa Cruz County (1)	
A. F. Cowden	J. C. Farmer
Shasta County (1)	
C. H. Haake	Sherman T. White
Siskiyou County (1)	
Szabo Kalman	C. W. Ankele
Solano County (1)	
John W. Green	D. B. Park
Sonoma County (1)	
S. S. Bogle	
Stanislaus County (1)	
J. L. Hennemuth	J. W. Morgan
Tehama County (1)	
J. A. Owen	F. J. Bailey
Tulare County (1)	
Harry J. Willey	Elmo R. Zumwalt
Tuolumne County (1)	
William L. Hood	G. C. Wrigley
Ventura County (1)	
F. E. Blaisdell, Jr.	C. E. Schultz
Yolo-Colusa County (1)	
Fred R. Fairchild	W. E. Bates
Yuba-Sutter County (1)	
F. B. Lawton	A. E. Gray

## FIRST MEETING OF HOUSE OF DELEGATES

Ball Room, Hotel Oakland, April 28, at 8 p. m.

## Order of Business

1. Calling to Order.
2. Roll Call.
3. Report of President.
4. Appointment of the Reference Committee by the President.
5. Report of the Council, James H. Parkinson, chairman (presented before the General Sessions).
6. Report of the Committee on Scientific Program, Emma W. Pope, chairman.
7. Report of the Auditing Committee, Morton Gibbons, acting chairman.
8. Report of Secretary, Emma W. Pope.
9. Report of Editor, W. E. Musgrave.
10. Unfinished Business.
11. New Business.
12. Reading and Adoption of Minutes.

## SECOND MEETING OF HOUSE OF DELEGATES

Ball Room, Hotel Oakland, April 30, at 8 p. m.

## Order of Business

1. Calling to Order.
  2. Roll Call.
  3. Announcement of the Place of Meeting, 1927.
  4. Election of Officers:
    - (a) Election of President-Elect.
    - (b) Election of Vice-President.
    - (c) Election of Councilors.
- Third District**—Incumbent, W. H. Bingaman, Salinas (1926)—San Luis Obispo and Monterey Counties.
- Fifth District**—Incumbent, David A. Beattie, San Jose (1926)—Santa Clara, San Mateo, San Benito, and Santa Cruz Counties.
- Sixth District**—Incumbent, W. B. Coffey, San Francisco (1926)—San Francisco County.
- Seventh District**—Incumbent, Dudley A. Smith, Oakland (1926)—Alameda, Contra Costa, San Joaquin, and Calaveras Counties.
- Ninth District**—Incumbent, James H. McLeod, Santa Rosa (1926)—Marin, Sonoma, Lake, Men-

docino, Solano, Napa, Del Norte, Humboldt, and Trinity Counties.

**Councillors-at-Large**—Incumbents, Rene Bine, San Francisco (1926); George H. Kress, Los Angeles (1926); Harlan Shoemaker, Los Angeles (1926); C. L. Curtiss, Redlands (1926).

(d) Election of Member on Program Committee (four years)—Incumbent, Lemuel P. Adams, Oakland (1926).

(e) Election of Delegates and Alternates to A. M. A.—Incumbent Delegates: Victor Vecki, San Francisco (1926); Hans Lissner, San Francisco (1926); Incumbent Alternates: C. Van Zwahlenburg, Riverside (1926); William Stevens, San Francisco (1926).

5. Report of Reference Committee.

6. Presentation of President.

7. Presentation of President-Elect.

8. Reading and Adoption of Minutes.

Adjournment.

### GENERAL INFORMATION

**Registration and Information**—The registration and information desk is located in the lobby, Hotel Oakland. All persons attending the Convention, whether members or not, are requested to register immediately on arrival. Beginning Monday, April 26, registration secretaries will be on duty daily from 9 a. m. until 5 p. m.

**Guests and Visitors**—All guests and visitors are requested to register. All General Sessions and scientific meetings are open to visitors and guests.

**Badges**—Four kinds of badges will be issued by the registration bureau.

**Members**—Only active, associate, affiliate or honorary members of the California Medical Association will be issued the usual membership badge.

**Guest**—A special badge will be issued to all fraternal delegates, visiting physicians, physiotherapists, medical social workers, nurses, and other technical specialists who are attending the meetings upon official invitation of the Association.

**Delegates and Alternates**—The usual official badge is provided for this purpose, and will be issued only to persons authorized to wear it.

**Councillors**—An official badge is provided for all members of the Council.

**Membership Cards**—Every member in good standing in the California Medical Association has been issued an official membership card for 1926.

**Suggestions and Constructive Criticism**—The officers and committees have tried to do everything possible to make the meeting a success. Suggestions and constructive criticism calculated to make future meetings more useful will be welcomed by any of the officers. Complaints of whatever character should be made to the registration desk, where they will receive attention.

**Social Program**—The social program is in the hands of the Entertainment Committee, and is published on the back of this program.

**Press Representatives**—Accredited press representatives are welcome, and they will be accorded every possible courtesy.

**Publicity**—All publicity is in the hands of the Publicity Committee. It is requested that all persons having matter of "news" value report it to this committee. It is particularly requested that all "news" about any phase of the Convention be given out through the official committee, and in no other way.

**Exhibits**—Only advertisers in California and Western Medicine are permitted to exhibit at the annual meeting. The Hotel Oakland has entire charge of the reserved space.

**Rules Regarding Papers and Discussions at the State Meeting**—Upon recommendation of the Executive Committee, the following rules regarding papers have been adopted by the Council:

1. The maximum time that may be consumed by any paper is fifteen minutes, provided that not to exceed ten minutes' latitude may be allowed invited guests at the discretion of the presiding chairman.

2. Motions from the floor to extend the time of an author may not be entertained by the presiding officer.

3. The maximum time permitted any individual discussant on any paper is four minutes. This also applies to the author in closing his discussion. No discussant may speak more than once upon the same subject.

4. No paper will be accepted by the General Program Committee nor by Section Program Committees unless accompanied by a synopsis of not to exceed fifty words.

5. Papers shall not be "read by title."

6. A copy of each and every paper presented at the state meeting must be in the hands of the chairman or secretary of the section or in the hands of the general secretary before the paper is presented.

7. No paper shall be read by any member of the Association at any Annual Meeting until the same has been submitted and approved by the Program Committee, and the Program Committee is authorized, if it so desires, in determining whether any paper shall be worthy of presentation, to secure the opinion of any member or members of the Association.

8. All papers read at the Annual Meeting shall be published in full in California and Western Medicine as soon after the meeting as space will permit, or at the option

of the author, an abstract of the paper of about one column in length shall be published as soon as possible after the meeting with reprints in full of the entire paper (the cost of setting up type for the reprint to be borne by the Association, and all other costs to be borne by the author).

9. No member may present more than one paper at any one state meeting, provided that members may present additional papers before Sections on Technical Specialties; and provided further, that a member may be a collaborator on more than one paper, if these papers are presented by different authors.

10. Failure on the part of an author to present a paper precludes acceptance of future papers from such author for a period of two years, unless the author explains, to the satisfaction of the Executive Committee, his inability to fulfill his obligation.

### PRE-CONVENTION CLINICS

By ruling of the council, the program for the 1926 meeting includes two pre-convention days, Monday, the 26th, and Tuesday, the 27th.

On these days there will be held dry clinics in Merritt Hospital, Hawthorne and Webster streets; Providence Hospital, Broadway and Twenty-sixth street, and Fabiola Hospital, Broadway and Moss avenue. It was hoped that the new Highland Hospital would be completed in time to be used also.

These clinics are under the direction of the arrangements committee and the program committee, who have secured prominent eastern guests to conduct them.

Dr. Gabriel Tucker, Bronchoscopic Clinic, University Hospital, Philadelphia, Pa., has furnished the following titles for these clinics:

April 26—"Esophagoscopy of Cicatricial Stenosis of the Esophagus," lantern slide and moving picture demonstration.

April 27—"Bronchoscopy of Disease." Lantern slide and moving picture demonstration.

Dr. Emil G. Beck, Chicago, Ill., will also conduct clinics.

No subjects have as yet been secured for Doctor Beck's clinics.

At the second general session Dr. Gabriel Tucker will speak on "Bronchoscopic Cases of General Surgical and Medical Interest" (lantern slide demonstration). Dr. Emil G. Beck will speak on "Suggestions for Reducing the Frequency of Recurrence in Cancer, Especially of the Breast."

Dr. John de J. Pemberton, Mayo clinic, Rochester, will also conduct pre-convention clinics, and on Thursday morning will address the second general session on the "Modern Management of Exophthalmic Goiter."

Detailed programs of the pre-convention clinics will, however, appear in the San Francisco and Oakland papers.

Afternoons of these days will be devoted to golf tournaments. Section meetings are scheduled for the afternoons of all other days of the convention.

It is hoped that a large attendance of the members will be present throughout the entire week and that these clinics will be well attended. The membership is earnestly urged to plan their time that they may include these pre-convention days in their schedule.

### FIRST GENERAL SESSION

EDWARD N. EWER, M. D., President,  
251 Moss Avenue, Oakland.

EMMA W. POPE, M. D., Secretary,  
1016 Balboa Building, San Francisco.

Ball Room, Hotel Oakland,  
Wednesday, April 28, 10 a. m.

1. *Address of Welcome*—Frank Colburn, Commissioner of Public Health and Safety.
2. *President's Annual Address*—Edward N. Ewer, M. D., 251 Moss Avenue, Oakland.
3. *Address of President-Elect*—William T. McArthur, M. D., 419 Pacific Mutual Building, 523 West Sixth Street, Los Angeles.
4. *Annual Report of the Council*—James H. Parkinson, M. D., Chairman, 1601 I Street, Sacramento.
5. *Report of Arrangements Committee*—Clarence De Puy, Chairman, Oakland.



## SECOND GENERAL SESSION

EDWARD N. EWER, M. D., President,

Ball Room, Hotel Oakland,

Thursday, April 29, 10 a. m.

1. *Bronchoscopic Cases of General Surgical and Medical Interest*—Lantern Slide Demonstration—Gabriel Tucker, M. D., Philadelphia, Pennsylvania.
2. *Suggestions for Reducing the Frequency of Recurrence in Cancer, Especially of the Breast*—Emil G. Beck, M. D., Chicago, Illinois.
3. *The Modern Management of Exophthalmic Goiter*—John de J. Pemberton, M. D., Mayo Clinic, Rochester.
4. *Medical Officers Reserve Corps*—Colonel E. L. Munson, Medical Corps, Presidio of San Francisco; J. Wilson Shiels, M. D., 403 Medico-Dental Building, 490 Post street, San Francisco.

## THIRD GENERAL SESSION

Better Health, Medical Economics, Education, and Hospitals

This Section is under the auspices of the League for the Conservation of Public Health.

DUDLEY SMITH, M. D., President,  
Oakland.

WILLIAM T. MCARTHUR, M. D., Secretary,  
Los Angeles.

Open to the public as well as to all members of the California Medical Association.

Ball Room, Hotel Oakland,  
Friday, April 30, 10 a. m.

1. *Where There are No Health Departments*—Saxton T. Pope, M. D., San Francisco.
2. *The Evolution of Preventive Medicine*—Walter V. Brem, M. D., Los Angeles.
3. *Five Hundred Words*—Celestine J. Sullivan.
4. Address by President Ray Lyman Wilbur, M. D., Stanford University: *Deficiencies of Modern Medicine*.
5. *Water—Its Relation to the Health and Progress of Big Communities* (Lantern Slide Illustrations)—M. M. O'Shaughnessy, Chief Engineer City and County of San Francisco.

## ANESTHESIOLOGY SECTION

H. A. THOMPSON, M. D., Chairman,  
405 Electric Building, 861 Sixth Street, San Diego.

DOROTHY A. WOOD, M. D., Secretary,  
1390 Seventh Avenue, San Francisco.

Blue Room, Mezzanine Floor, Hotel Oakland,  
Wednesday, April 28, 2:30 to 5 p. m.

1. *President's Address*—Harold A. Thompson, M. D., San Diego.
2. *The Evaluation of the Surgical Risk*—Dr. F. H. McMechan, Secretary General Associated Anesthetists, United States and Canada.  
Newer methods used in the determination of operability, with a resultant lowered post-operative mortality.
3. *The Bad Risk and the Operating Team*—Rea Smith, M. D., 502 Medical Office Building, 1136 West Sixth Street, Los Angeles.  
Evaluation of patient. Preparation, physical and psychological. Operating-room: Arrangement, temperature, and humidity. Postural comfort of patient and staff; the surgeon himself. The team—the anesthetist—the medical member of the surgical team. Charting of patient's reaction throughout, and prognosis. Immediate post-operative care.
4. *Analytical Study of Charts of Patients Who Died Post-operatively*—Dorothy Wood, M. D., 1390 Seventh Avenue, San Francisco.

Classification of operability according to: 1. Moot's

Index. 2. Froes and Declairfay's Shock Index. 3. The Energy Index. Conclusions.

5. *The Disadvantages of Adrenalin Solution in Local Anesthesia, in General Surgery*—Alanson Weeks, M. D., LeRoy Brooks, M. D., 1001 Fitzhugh Building, 384 Post Street, San Francisco.

The reasons for the use of adrenalin as a local anesthetic, with its supposed advantages. The systematic and local effects from adrenalin, with their relation to the success or failure of the local anesthetic, and to the success or failure of the wound healing. Some reasons why adrenalin is a disadvantage rather than an advantage in local anesthesia.

6. *The Effect of Morphine and Atropine on Renal Function Under Nitrous-Oxide and Oxygen Anesthesia*—Mary E. Botsford, M. D., 807 Francisco Street, San Francisco.

Inhibition of kidney function by ether. Routine omission of morphine and atropine preliminary to cystoscopy. Results of Haine and Miliken on the effect of morphine and atropine on renal function under ether anesthesia. Comparison of results under nitrous-oxide oxygen anesthesia.

## PACIFIC COAST ANESTHETISTS

R. F. HASTREITER, M. D., Chairman,  
Brockman Building, 520 West Seventh Street,  
Los Angeles.

ELEANOR SEYMOUR, M. D., Secretary,  
845 West Tenth Street, Los Angeles.

Blue Room, Mezzanine Floor, Hotel Oakland,  
Thursday, April 29, 2:30 to 5 p. m.

1. *Chairman's Address*—R. F. Hastreiter, M. D., Brockman Building, 520 West Seventh Street, Los Angeles.
2. *Experiences and Methods in Dental Anesthesia*—J. F. Wilkinson, D. D. S., Melbourne, Australia.
3. *Recent Developments in the Science and Art of Anesthesia*—Frank H. McMechan, M. D., Secretary General Associated Anesthetists, Avon Lake, Ohio.
4. *Economics in the Efficient Use of Gases for Anesthesia*—Donald Baxter, M. D., 910 North Brand Boulevard, Glendale.
5. *Anesthetic Routine*—Edgar I. Leavitt, M. D., 184 Forest Side, San Francisco.

Pre-operative procedures; management of the anesthesia; types of anesthetics given; post-operative procedures.

6. *The Limitations of Nitrous-oxide Oxygen Anesthesia*—Lorruli A. Rethwilm, 2217 Webster Street, San Francisco.

In Nitrous Oxid-oxygen Anesthesia: I. The surgeon (a) must operate with feather-touch to assure a successful anesthesia; (b) will find the use of local anesthesia a help. II. The patient (a) is endangered if nitrous oxid is forced (1) in cardiac conditions; (2) in very young or very old patients. III. The anesthetist (a) must be a physician, well trained in general anesthesia; (b) must possess an intimate knowledge of the limits to which nitrous oxid can be pushed with safety.

## DERMATOLOGY AND SYPHILOLOGY SECTION

MOSES SCHOLTZ, Chairman,  
718 Brockman Building, 520 West Seventh Street,  
Los Angeles.

SAMUEL AYRES, Secretary,  
517 Westlake Professional Building,  
2007 Orange Street, Los Angeles.

### FIRST MEETING

### Symposium on Allergic Skin Diseases

West Room, Hotel Oakland,  
Wednesday, April 28, 2:30 to 5 p. m.

1. *Report of a Case of Urticaria Pigmentosa in a Young*

*Adult*—Merlin T. T. Maynard, M. D., 511 Twohy Building, San Jose.

Urticaria pigmentosa is considered a disease of childhood, and is rare in any case. The adult cases on record are few and worthy of report. The case reported is of a young woman. The onset of the disease was post-adolescent. The only other complaint was suggestive of chronic cholecystitis. The lesions were typical in form, reaction, and pathology. The treatment was not successful in relieving the condition.

2. *Skin Manifestations of Allergy—A Report of Some Two Hundred Cases*—George Piness, M. D., Hyman Miller, M. D., 608 Medical Office Building, 1136 West Sixth Street, Los Angeles.

A review of these skin conditions which have been identified as allergic in origin, together with the results of protein skin tests in these conditions, and a discussion of the principles and practice of protein skin testing.

3. *Some Observations on Urticarial Eruptions of the Skin*—Thomas J. Clark, M. D., 830 Oakland Bank Building, Broadway at Twelfth Street, Oakland.

The different types of urticaria. What do we know of the mechanism of production of the wheal? Are the majority of urticarias due to anaphylaxis? What is the relation of the reaction in the skin to the protection of the nervous system? Tracing out etiological factors so that we may have rational treatment.

4. *Treatment of Pruritus of Anus and Genitalia*—H. E. Alderson, M. D., 320 Medico-Dental Building, 490 Post Street, San Francisco.

Definition and discussion of terms. Etiology. Futility of depending entirely upon symptomatic treatment. The therapy must vary with the case, although there are some local measures that give temporary relief in most instances. Discussion and local treatment.

#### SECOND MEETING

##### Symposium on Syphilis

West Room, Hotel Oakland,

Friday, April 30, 2:30 p. m.

1. *The Biological Features of Syphilis*—H. P. Jacobson, M. D., 313 North Soto Street, Los Angeles.

A study of the methods of spirochaetal invasion and the significance of the various types of eruption as indicating the manner of natural defense. The influence of the skin in immunology and illustrations thereof. The biological meaning of the Wassermann reaction. Its clinical significance and limitation as a guide in the diagnosis and treatment of syphilis.

2. *The Diagnosis of Genital Lesions*—H. J. Templeton, M. D., 3115 Webster Street, Oakland.

The prognosis of syphilis is best if it is diagnosed and treated before the blood Wassermann becomes positive. Such an early diagnosis can only be made by the dark-field microscope. Dark-field examinations should be made repeatedly until the incubation period of a possible chancre has passed. All genital lesions should be suspected of being luetic until absolutely proved otherwise.

3. *Experience With the Bismuth Treatment of Syphilis*—Irwin C. Sutton, M. D., Taft Building, 1680 Vine Street, Hollywood, California.

Description of the different preparations of bismuth. Technic of their use. Mode of action of the drug. Absorption and elimination. Curative qualities of bismuth. Accidents and incidents of treatment. Therapeutic evaluation.

4. *The Management of Vascular Syphilis*—Ernest K. Stratton, M. D., 414 Medico-Dental Building, 490 Post Street, San Francisco.

The importance of keeping constantly in mind the picture of the newer pathology of syphilis. The value of routine and repeated examinations of the large vessels, as well as the other vital structures affected by the process. Therapy problems, depending on the location, duration, and type of involvement.

#### THIRD MEETING

West Room, Hotel Oakland,

Saturday, May 1, 2:30 p. m.

1. *Chairman's Address: Dermatology as a Medical Science, Healing Art, and Practice of Medicine*—Moses Scholtz, M. D., 718 Brockman Building, 520 West Seventh Street, Los Angeles.

Definition. Demarkation from the internal medicine. Dermatology versus general practitioner. Dermatology as a practice of medicine. Local versus systemic dermatoses. Methodology of dermatological research. Morphology of skin lesions. Its clinical significance. Skin reaction as a morphologic conception. Dermatologic diagnosis. Dermatologic pathogenesis. Dermatologic histopathology. Dermatologic prognosis. Dermatologic therapeutics. Specific dermatological problems.

2. *Endothermy in Dermatology*—Kendal Frost, M. D., 831 Pacific Mutual Building, 523 West Sixth Street, Los Angeles; G. F. Koetter, M. D., 831 Pacific Mutual Building, Los Angeles.

Endothermy (electrodesiccation and electrocoagulation) is a valuable physical method of tissue destruction. Combined with roentgen ray or radium, it forms an added measure for combating large malignancies. It is the method of choice for removing certain types of nevi, verrucae, and small epitheliomas. Chronic radium or x-ray atrophies are successfully removed by this means and more simply than by surgical excision.

3. *Relationship of the Radiologist and Dermatologist*—F. W. Howard Taylor, M. D., 307 Van Nuys Building, 210 West Seventh Street, Los Angeles.

I. Introduction: (a) Concise history of x-ray. (b) Adaptation to therapy. (c) Adoption by dermatologist. II. Uses in dermatology: (a) Enumeration of frequent conditions treated as skin cancer, ringworm, psychosis, acne, eczema and lichen planus hypertrophica, etc. (b) Abuses—faults of dermatologist—as lack of basic radiological knowledge, improper equipment, technique, records, carelessness, filtering, shielding, and fear to give sufficient dose. Faults of radiologist—as lack of diagnostic knowledge, appreciation and elimination of etiology. Failure to use other remedies, tending to overdose. III. Conclusions: X-ray is most valuable agent in dermatology. Criticism of dermatologist is that his lack of basic physical factors in the production and application of rays tends toward poor results and false impressions of the remedial properties of this agent. Criticism of the radiologist is that his lack of dermatology (etiology, diagnosis and drug therapy) limits his results and often is a factor in too prolonged radiation for the desired cure.

4. *Superficial Epitheliomata*—C. J. Lundsford, M. D., 100 Judah Street, San Francisco; L. R. Taussig, M. D., 803 Fitzhugh Building, 384 Post Street, San Francisco.

A review of the case histories of patients treated in the out-patient department of the University of California Medical School between 1920 and 1926. An analysis of about 350 cases of squamous and basal cell epitheliomata, including those of the skin, lip, tongue, and buccal mucous membrane. A description of the types of lesions encountered, the treatment rendered, and the results obtained.

#### EYE, EAR, NOSE, AND THROAT SECTION

WILLIAM H. DUDLEY, M. D., Chairman,

512 Brockman Building, 520 West Seventh Street, Los Angeles.

PERCIVAL DOLMAN, M. D., Secretary,

1035 Medico-Dental Building, 490 Post Street, San Francisco.

Rose Room, Hotel Oakland

The officers of the Eye, Ear, Nose, and Throat Section have decided to program three round-table discussions instead of the usual group of papers.

The reason for abandoning the customary program is



the meeting of the Pacific Coast Oto-Ophthalmological Society in San Francisco on Monday, April 26; Tuesday, April 27, and Wednesday, April 28. The meetings of the Eye, Ear, Nose, and Throat Section of the California Medical Association will be held on the following three days of that week—Thursday, April 29; Friday, April 30, and Saturday, May 1.

The program of the Pacific Coast Oto-Ophthalmological Society will be made up of well-selected papers of a scope paralleling our usual programs. It is believed that three days of listening to papers is about the limit of sustaining interest. The change in our program to informal round-table discussions for the last three days of the week will provide a new stimulus and be of equal educational value.

It is proposed to conduct the round-table discussions under the chairmanship of well-known men of wide experience, drawn, if possible, from the Eastern group who have been invited to attend the meeting of the Pacific Coast Oto-Ophthalmological Society.

The subjects selected for discussion and the names of the chairmen will be published later.

## GENERAL MEDICINE SECTION

ROY E. THOMAS, Chairman,

403 Medical Office Building, 1136 West Sixth Street,  
Los Angeles.

J. MARION READ, Secretary,

1183 Flood Building, 870 Market Street,  
San Francisco.

### FIRST MEETING

Ebell Hall, Fourteenth and Harrison Streets,  
Wednesday, April 28, 2 to 4:30 p. m.

1. *The Use of Lipiodol in the Diagnosis of Cord Tumors*—Julian M. Wolfsohn, M. D., 1401 Medico-Dental Building, San Francisco; Edmund J. Morrissey, M. D., 201 Medical Building, 909 Hyde Street, San Francisco.

This report is based on the detailed examination of two cases diagnosed as lesion of the cauda equina, confirmed by the intrathecal injection of lipiodol, and verified by operation. History of long-standing symptoms the outstanding feature. Plea for earlier recognition of these cases.

2. *Recent Developments in Pernicious Anemia, With Especial Reference to the Blood Serum*—Arthur E. Mark, M. D., 712 Taft Building, 1680 Vine Street, Hollywood.

Recent advances in pernicious anemia have centered around its accompanying symptomatology and findings. The glossitis achlorhydria, as well as subacute combined sclerosis in 80 per cent of cases, presents a large field for speculation and investigation. The above plus other findings, as the increase in the average size of the red cells with a resulting increased volume index; the demonstration of the bacillus of Welch in the stools; evidence of hemolysis, as manifested by the positive indirect Van den Bergh; the color of the blood serum, etc., all aid materially in the diagnosis.

3. *The Emetin Treatment of Chronic Arthritis*—Leonard W. Ely, M. D., Stanford University Hospital, Clay and Webster Streets, San Francisco.

Résumé of the cases treated in the Stanford orthopedic clinic, and in private practice. Results. Types of cases in which emetin is indicated. Methods of administration. Dangers.

4. *Primary Carcinoma of the Lung—Report of Two Cases*—Julius Sherman, M. D., 616 Union Square Building, 350 Post Street, San Francisco.

Two cases observed in private practice are reported. Both were operated upon, confirming the diagnosis; lobectomy done in one case. Occurrence, etiology, pathological anatomy, symptoms, and diagnosis will be considered briefly.

5. *Treatment of Obesity*—H. C. Shepardson, M. D., 204

Fitzhugh Building, 384 Post Street, San Francisco; R. Emmett Allen, M. D., University of California Medical School.

Different types of obesity are known. Metabolism of obesity is different from normal metabolism, and the basal caloric requirements are lower than is usually assumed. No loss of weight occurs when some cases are on lowest caloric intake compatible with health. Glandular therapy will further reduce weight in many cases. Many obese individuals show various evidences of endocrine dyscrasia. There may be a change in body form without proportional weight change.

Note—Immediately following the sessions on Wednesday and Thursday afternoons, there will be a demonstration of heart murmurs by use of the electrical stethoscope. The instrument will be set up in the meeting room of the Medical Section, and demonstrated by Doctors William J. Kerr, J. J. Sampson, and R. L. McCalla.

### SECOND MEETING

Ebell Hall, Fourteenth and Harrison Streets,  
Thursday, April 29, 2 to 4:30 p. m.

1. *Ketogenic Diets for Epileptics*—D. Schuyler Pulford, M. D., Woodland Clinic, Woodland.

The subject will be discussed under the following heads: (1) Charts and molecular formulae great aid in calculating ketogenic diets. (2) Normal nutrition and mental development of child unimpaired. (3) Samples of Threshold and Ketogenic Diets and necessary adjuncts to the diets. (4) Reasons for failure. (5) Review of literature and case reports.

2. *An Analysis of Heart Murmurs*—J. J. Sampson, M. D., University of California; R. L. McCalla, M. D., University of California Medical School.

Graphic records of heart sounds and murmurs are valuable clinically, in that they provide: (1) Permanent impersonal means of comparison with subsequent observation; and (2) a method of accurately placing the time and pitch of sounds or phases of murmurs which occasionally establishes the existence of otherwise doubtful sound vibrations. Previous methods of phonocardiography were of less value than the one here employed, because the low frequency of the string vibration caused loss of detail, and sound filtration and amplification was not used.

3. *The Use of Theobromine for Pain of Arteriosclerotic Origin*—William Dock, M. D. (by invitation).

A summary of the history of the use of the drug, the extent to which this is recognized in present literature, and the pharmacologic basis for its use in angina pectoris. A discussion of the types of angina, with reference to anticipating which cases should be benefited by the drug. The significance in prognosis of relief of pain by theobromine. Selection of cases, case histories, and method of administration.

4. *Diabetic Coma Treated by Insulin*—William H. Leake, M. D., Taft Building, 1680 Vine Street, Hollywood.

This paper is based upon a series of cases of diabetic coma treated with insulin at the Los Angeles General Hospital. Many of these patients were moribund on admission, while others showed severe complications. Several patients died after regaining consciousness; the cause of death was probably of cardiac origin. Graphic charts of selected cases showing the effects of large doses of insulin on the blood sugar in diabetic coma.

5. *Comparison of the Glucose and Starch Tolerance in Normal and Diabetic Individuals*—Hobart Rogers, M. D., and Albert H. Rowe, M. D., 242 Moss Avenue, Oakland.

This paper presents a review of the literature relating to carbohydrate tolerance tests and presents the findings of an original investigation in which curves obtained following a standard starch meal are compared with those obtained following a stand-

ard glucose meal in the same normal people, non-diabetic and diabetic patients. The authors' conclusions regarding carbohydrate tolerance tests are presented.

### THIRD MEETING

Ebell Hall, Fourteenth and Harrison Streets,

Saturday, May 1, 10 to 12:30 a. m.

1. *Our Present Conception of Essential Hypertension*—Chairman's Address—Roy E. Thomas, M. D., Los Angeles.
2. *Glimpses of Sir William Osler, the Man*—Edgar Lorrington Gilcreest, M. D., 315 Fitzhugh Building, 384 Post Street, San Francisco.

Intimate glimpses of the personal and human side of Sir William Osler during the war. Ward rounds and luncheons with him. His brilliant conversation, sparkling with humor and wit. Reference to the Carnegie Fund for Professors and to Rockefeller's interest in medical science. Osler is an ardent bibliophile. His wonderful collection of the masters of medicine. His talks on the history of medicine. His quickness to grasp a situation and to penetrate character. His claim to remembrance.

3. *Acute Leukemia and Agranulocytic Angina Associated With or Following the Removal of Teeth—Report of Four Cases*—Harold P. Hill, M. D., 501 Fitzhugh Building, 384 Post Street, San Francisco.

Case I and II, showing clinical acute leukemia. One autopsy report. Case III, clinical course and blood picture of an agranulocytic angina. Case IV, showing a variable blood picture; at first that of an agranulocytic type followed by a marked polymorphonuclear leucocytosis.

4. *Tricuspid Disease*—William J. Kerr, M. D., University of California; L. F. Morrison, University of California.

Relative tricuspid insufficiency is commonly associated with dilatation of the right heart. Organic tricuspid valve disease is seldom recognized clinically, although the incidence is higher than textbooks would indicate. The long-standing disability, cyanosis, dyspnoea, localized murmurs and venous disturbances should suggest the diagnosis in the presence of rheumatic heart disease. The spleen is frequently palpable. The x-ray shadow of the heart is usually triangular. Report of cases.

5. *Poisonous Spider-bites*—George D. Maner and Emil Bogen, M. D., 1100 Mission Road, Los Angeles.

Fifteen patients bitten by the "black widow," a poisonous spider, have been treated at the Los Angeles General Hospital. A review of over three hundred published articles shows that similar cases have been known in every part of the earth. More than a hundred cases have been reported from California alone. The symptoms closely simulate an acute abdominal disease. A number of deaths have been ascribed to this cause. A curative serum is being tried out in Los Angeles. Experimental work on the spider venom and its action on animals is described. A motion picture illustrating the "black widow" is presented.

6. *The Increasing Clinical Importance of Lactic Acid*—George D. Barnett, M. D., Stanford University Medical School.

Historical and chemical aspects of lactic acid. Early clinical observations. Role of lactic acid in carbohydrate metabolism and muscular contraction. Effects of athletic training. Lactic acidosis and cardiac dyspnea. Respiration of normal and malignant tissues. Lactic acid in exudates and transudates. Cerebrospinal fluids. The future.

### GENERAL SURGERY SECTION

THOMAS O. BURGER, M. D., Chairman,  
1200 National Bank Building, 1007 Fifth Street,  
San Diego.

JOHN HOMER WOOLSEY, M. D., Secretary,  
907 Medico-Dental Building, 490 Post Street,  
San Francisco.

### FIRST MEETING

Ebell Hall, Fourteenth and Harrison Streets,  
Wednesday, April 28, 2 p. m.

1. *Chairman's Address*—Thomas O. Burger, M. D., 1200 First National Bank Building, 1007 Fifth Street, San Diego.

2. *Perinephritic Abscess*—Sumner Everingham, M. D., 203 Medical Building, Oakland.

The relation to preceding pyogenic infections, the involvement of the kidney, the points for diagnosis, and the treatment, both local and general.

3. *Perinephritic Abscess, Following Peripheral Infection*—Anders Peterson, M. D., 810 Medical Office Building, 1136 West Sixth Street, Los Angeles.

A paper concerning the avenues of infection, the question of the involvement of the kidney in the absence of urinary findings; the symptomatology and differential diagnosis; the surgical approach, and a report of cases.

4. *Thyroglossal Duct Cysts* (Lantern Slides)—John Hunt Shephard, San Jose.

Thyroglossal duct cysts arise from a developmental defect, have certain definite anatomical relationships, and for a cure must have a complete removal of all epithelial tissue throughout the tract.

5. *Dislocations of the Outer End of the Clavicle*—John Dunlop, M. D., 803 Pacific Mutual Building, 523 West Sixth Street, Los Angeles.

A review of dislocations of the outer end of the clavicle with reference to the manner of production of such dislocations, the anatomy of the acromioclavicular joint, the pathology of the dislocation, the usual methods of treatment, the recent suggestions of treatment, and treatment based upon the anatomical repair.

### SECOND MEETING

Ebell Hall, Fourteenth and Harrison Streets,  
Friday, April 30, 2 p. m.

1. *The Hydro-mechanics in Acute Appendicitis* (Lantern Slides)—C. Van Zwalenburg, M. D., Cornelius Glen-Wood Building, Riverside.

Acute appendicitis is caused by a narrowing in the lumen of the appendix, a lodgement of a fecal plug or fecolith behind this constriction, a distension of the appendix beyond this point, an arrest of the circulation in the mucosa, submucosa, and eventually in the wall from hydraulic pressure, and consequently infection from organisms is always present.

2. *Abdominal Drainage*—J. C. Robertson, M. D., 1003 Twelfth Street, Modesto, California.

The general trend of abdominal drainage is becoming extremely conservative. Rowlands and Fagge of London, DuVall of Paris, and Pfister of Vienna are all advocating little or no abdominal drainage. The four sources of infection into the peritoneal cavity are: (1) The stomach and pylorus. (2) Gallbladder. (3) Acute appendicitis. (4) Tubal infection. These will be dealt with separately, as to methods of drainage.

3. *Perforated Duodenal Ulcer*—Charles T. Sturgeon, M. D., 509 Medical Office Building, 1136 West Sixth Street, Los Angeles.

Perforated duodenal ulcer will be discussed according to the following points: (a) Early diagnosis. (b) Type of operation indicated. (c) Is an ulcer healed by perforation? (d) When should drainage be employed? (e) The post-operative care.

4. *Diagnosis and Treatment of Echinococcus Cysts of the*



*Liver*—Lucius W. Hotchkiss, M. D., 22 West Micheltorena Street, Santa Barbara.

A résumé of the cause, symptomatology, complication, and surgical treatment. A report of a case of infected cyst with unusual features.

5. *The Use of the Tubed Pedicle Flap in Plastic Surgery* (Lantern Slides)—George Warren Pierce, M. D., 720 Medico-Dental Building, 490 Post Street, San Francisco.

A description of the technic of making a tubed pedicle and illustration of the various advantages and use of this specialized flap. Report of several cases. Illustrated with lantern slides and moving pictures.

#### THIRD MEETING

Ebell Hall, Fourteenth and Harrison Streets,  
Saturday, May 1, 10 a. m.

1. Election of Officers and Transaction of Section Business.
2. *The Surgical Risks in Intracranial and Spinal Surgery*—Howard C. Naffziger, M. D., 419 Fitzhugh Building, 384 Post Street, San Francisco.

Brain tumors, with special reference to risks, depending on various pathological types of growth, and risks depending on location of growth. Tic douloureux. Spinal cord lesions. The role of anesthesia in surgical mortality.

3. *The Treatment of Empyema* (Lantern Slides)—E. Eric Larson, Woodland Clinic, Woodland.

The employment of the closed or open method, dependent upon the type of bacteria found. The value of lipiodol to demonstrate the cause of persistent drainage in empyema. Report of a constant suction apparatus to keep the cavity by closed drainage continuously collapsed.

4. *Bronchiectasis—Its Diagnosis by Lipiodol Injection* (Lantern Slides)—Harold Brunn, M. D., 1001 Fitzhugh Building, 384 Post Street, San Francisco.

Lipiodol—its formula and methods of administration for diagnosing lung conditions. The advantage over other methods. A series of case reports of bronchiectasis with lantern slides, both before and after the use of lipiodol.

### INDUSTRIAL MEDICINE AND SURGERY SECTION

FRED R. FAIRCHILD, Chairman,  
Woodland Clinic, Woodland.

C. E. VON GELDERN, Secretary,  
1010 Forum Building, Sacramento.

Ebell Hall, Fourteenth and Harrison Streets,  
Thursday, April 29, 2 to 4:30 p. m.

1. Business Meeting.

### NEUROPSYCHIATRY SECTION

JOSEPH CATTON, M. D., Chairman,  
609 Howard Building, 209 Post Street,  
San Francisco.

CARL W. RAND, M. D., Secretary,  
1034 Pacific Mutual Building, 523 West Sixth Street,  
Los Angeles.

#### FIRST MEETING

South Room, Hotel Oakland  
Wednesday, April 28, 2 p. m.

1. Chairman's Address: *A Practical Clinical Psychology*—Joseph Catton, M. D., 209 Post Street, San Francisco.
2. *Some Practical Considerations in the Treatment of Delirium Tremens*—Nathaniel H. Brush, M. D., 193 Micheltorena Street, Santa Barbara.

In the treatment of delirium tremens there are certain practical points which may be overlooked, such as nursing, therapeutic measures, including hydro-

therapy, and particularly the proper use of sedatives. The injudicious application of restraint, the careless administration of hypnotics, the neglect of other essentials may lead to disastrous consequences.

3. *The Colloidal Gold Reaction—Its Every-day Clinical Uses*—Henry C. Mehrtens, M. D., Stanford University Hospital, San Francisco.

1. Its diagnostic importance in neurosyphilis, encephalitis, combined sclerosis, apoplexies, and in cord irritations secondary to transient infections. 2. Its usefulness in determining prognosis in neurosyphilis and other inflammatory conditions of the meninges.

4. *Ramisection in Spastic Paralysis—Report of a Series of Ramisections*—Steele F. Stewart, M. D., 2007 Wilshire Boulevard, Los Angeles.

A brief résumé of the duality of muscle anatomy and physiology, the technic used, and a study of the results in a series of about twenty-five operations. Necessity for careful selection of cases and a careful post-operative study.

#### SECOND MEETING

South Room, Hotel Oakland  
Friday, April 30, 2 to 4:30 p. m.

1. *Treatment of Brain Abscess*—Howard W. Fleming, M. D., 384 Post Street, San Francisco.

Frequency. Etiological factors. Pathology. Clinical Causes. Diagnostic difficulties. Surgical methods employed. Post-operative complications. Sequelae. Lantern slides.

2. *Late Paralysis of the Ulna Nerve*—Charles L. Tranter, M. D., 209 Post Street, San Francisco.

Two cases showing free interval of twenty-five and eleven years, respectively, between injury and first appearance of symptoms. Cases showing cubitus valgus following fracture of the external condyle in childhood may develop late ulnar paralysis. Improvement after transposition of the nerve to a position anterior to internal condyle. Lantern slides.

3. *Psychiatry's Part in Medicine*—Robert Lewis Richards, M. D., 409 Fitzhugh Building, 384 Post Street, San Francisco.

1. Growth and management of the mental side of individuals.

2. Certain epochal mental growth problems.
3. Needs of mental medical education if logical.
4. Relations to medical treatment in general.
5. Treatment of special mental conditions by psychiatry as meeting the last demand on medicine.

4. *Neuro-otological Studies in Syphilis*—Fred H. Linthicum, M. D., 523 West Sixth Street, Los Angeles.

For the past five years, with material obtained in the neuro-otological clinics of the Los Angeles General Hospital and the Children's Hospital, groups of syphilites have been studied from the standpoint of impairment of function of the inner ear, the eighth nerve, and its ramifications.

### OBSTETRICS AND GYNECOLOGY SECTION

JOHN W. SHERRICK, Chairman,  
350 Twenty-ninth Street, Oakland.

JOHN A. SPERRY, Secretary,  
903 Medico-Dental Building, 490 Post Street,  
San Francisco.

#### FIRST MEETING

South Room, Hotel Oakland  
Thursday, April 29, 2:30 to 5 p. m.

1. *Undiagnosed Pain in the Lower Abdomen Due to Stricture of the Ureter*—Lewis Michelson, M. D., 434 Medico-Dental Building, 490 Post Street, San Francisco.

Discussed by W. W. Cross, M. D., Oakland.

(a) Its importance in gynecological diagnosis and treatment. (b) Stricture of the ureter is much more common than supposed. The minor cases are commonest and those not recognized. Often mistaken

for other abdominal diseases, and as a result many unnecessary operations are performed. (c) Diagnosis and treatment.

2. *Caesarean Section in Obstructed Pelves*—T. Henshaw Kelly, M. D., 835 Medico-Dental Building, San Francisco; Reginald Knight Smith, M. D., 830 Medico-Dental Building, 490 Post Street, San Francisco.

In obstructed pelves the problem is the delivery of the child with the least risk to its mother and itself. The majority of contracted pelves permit delivery through the natural passages, by spontaneous or assisted delivery, but in a certain number of patients the head remains floating after hard pains have begun. Dilation of the cervix in the presence of a floating head is usually slow, and it is often the custom to allow full dilation before considering any interference. The mortality in mothers and children in high forceps application is not inconsiderable, and the application of forceps to a floating head is not to be thought of. It is not always possible to permit full cervical dilation before the beginning of maternal exhaustion, and if Caesarean section is used in patients of this type as an operation of choice, and not as a last resort, its mortality is reduced to a very low figure. The mortality of Caesarean section is not inherent in the operation itself, but is usually the result of its ill-considered use. If the operation is used properly and early enough in contracted and obstructed pelves, its mortality should be lower than that of any other attempted method of delivery. A study of a series of cases is presented to develop the point.

3. *Rectal Analgesia in Obstetrics*—Lyle G. McNeile, M. D., 1021 Pacific Mutual Building, 523 West Sixth Street, Los Angeles.

History of efforts to relieve pain during labor. Advantages and disadvantages of inhalation analgesia during labor. Scopolamine morphine analgesia, its advantages and disadvantages. Outline of work of Gwathmey on rectal analgesia in obstetrics through the instillation of some ether oil combination by rectum. Use of morphine and magnesium sulphate solution by hypodermic in conjunction with rectal instillation. Use of certain other drugs by hypodermic to increase the effect of rectal instillation. Detailed technique. End results.

#### SECOND MEETING

South Room, Hotel Oakland

Saturday, May 1, 2:30 to 5 p. m.

1. Chairman's Address: *The Physiology and Minor Pathology of the Functioning Breast*—John W. Sherrick, M. D., 350 Twenty-ninth Street, Oakland.

A résumé of our present ideas of the physiology of the breast, its care in the prenatal period and during lactation, with suggestions as to how best to maintain an active secretion and to anticipate and deal with some of the more common lesions arising during this active period. Some of the more common benign pathological lesions will be discussed.

2. *The Kielland Forceps*—Sterling N. Pierce, M. D., 1200 South Alvarado Street, Los Angeles.

The forceps were invented by Christian Kielland in 1908, but were not introduced to the profession until 1915, at a meeting of the Munich Gynecological Society. A description of the forceps will follow, together with a description of the various methods of application. A brief review of the German literature will serve to show how the leading obstetricians are disposed toward the Kielland instrument. American writers will also be quoted, but few, however, in this country have had any experience with these new forceps. Report of about fifty cases, five in some detail; personal experience with the forceps will be drawn on. The Kielland forceps compete with various other obstetrical procedures in handling occiput posterior and high transverse positions, viz.: Scanzoni maneuver; manual rotation and application of Simpson instruments; internal podalic version and extraction; cervical Caesarean section. These forceps, I believe, are much safer for the

baby, because the blades are always applied in the by-parietal diameter, regardless of the direction of the sagittal suture. The instrument, when once applied, rarely needs adjusting, and the mechanism of labor can be more easily imitated with the Kielland forceps.

3. *History of a Case of Inversion of the Uterus*—Henry Newton Shaw, M. D., 901 Pacific Mutual Building, 523 West Sixth Street, Los Angeles.

1. Etiology. 2. Diagnosis. 3. Treatment. 4. Prognosis. 5. Conclusions: Very small number of pregnancies have occurred following operations for re-inversion of the uterus. Hysterotomy performed in infected tissue leaves a scar which could not be depended upon in subsequent pregnancies. These facts, in conjunction with the high fever and very serious evidences of absorption phenomena following the conservation operations, lead us to believe that vaginal hysterectomy should be performed more often than at present.

#### PATHOLOGY AND BACTERIOLOGY SECTION

F. R. NUZUM, M. D., Chairman,  
Cottage Hospital, Santa Barbara.

ROY W. HAMMACK, M. D., Secretary.  
523 West Sixth Street, Los Angeles.

Blue Room, Mezzanine Floor, Hotel Oakland,  
Friday, April 30, 2:30 to 5 p. m.

1. Chairman's Address and Secretary's Report.
2. *Quantitative Examination of Albumin in Urine*—A. M. Moody, M. D., St. Francis Hospital, San Francisco.

This report will consist of brief discussion of various methods used in the quantitative determination of albumin in urine and the details of a simplified technic.

3. *The Experimental Production of Arteriosclerosis*—F. R. Nuzum, M. D., Santa Barbara Cottage Hospital, Santa Barbara.

There is great diversity of opinion concerning the etiological factors of increased blood pressure and arteriosclerosis. Stress is being laid, at the present time, on excessive protein in the dietary. Our work has been concerned with the acid radicals of the excessive protein.

We have carried feeding experiments on rabbits through a period of two years, recording the blood pressure and the urine and blood chemistry. At the end of this time careful histological study has been made as to changes in the cardio-vascular renal system. We have succeeded in producing an increased blood pressure, a clinical nephritis, marked sclerosis of the aorta and of the vessels of the kidneys.

4. *The Action of Spider Poison—An Experimental Study*—Emil Bogen, M. D., Los Angeles General Hospital, Los Angeles.

Recorded studies of the venom of spiders are highly contradictory and incomplete. The striking effects of the bite of the *Latrodectus Mactans* or "black widow" spider, as observed in patients at the Los Angeles General Hospital, suggested the need for further research. Experiments *in vitro* have so far been negative. Experiments performed on various animals have given surprising results. Tentative conclusions and applications to therapy are discussed.

5. *Chronic Appendicitis*—A pathological study of three hundred consecutive cases from the records of the White Memorial Hospital, Los Angeles—H. E. Butka, M. D., White Memorial Hospital, Los Angeles.

Numerous papers written in recent years regarding chronic appendicitis serve to confuse. Such questions are being asked: "Is chronic appendicitis a myth?" Such statements as this, "There are two types of appendicitis, acute appendicitis, and appendicitis for revenue only," are frequent.

The present paper presents a study of some three hundred cases from pathologists' viewpoint, and



includes all consecutive cases except the acute purulent and gangrenous types of appendicitis.

An attempt is made to group the cases as follows:

1. Operated for chronic appendicitis.
2. Operated for hernia—appendix removed secondarily.
3. Operated for pelvic tumors—appendix removed secondarily.
4. Operated for pus tubes—appendix removed secondarily.
5. Operated for gall-bladder conditions—appendix removed secondarily.

An analysis is made of these cases and conclusions drawn.

6. *The Relationship Between the Clinician and the Clinical Laboratory in a Standardized Hospital*—Roy Stevenson, M.D., Electric Building, San Diego.

Standardized methods of procedure to be outlined by supervision of laboratory; and not various modifications preferred by clinician. A comprehensive requisition of clinical data for work desired which enables better team work between pathologist and clinician. A system of laboratory fees, satisfactory to the clinico-pathologist, but not embarrassing the amount of work done for the best interest of the patient. Routine work required and specialized procedures. Record system—staff conferences for discussion of ante and post-mortem pathological conditions in relation to the living and normal. Securing the greater percentage of necropsies.

### PEDIATRICS SECTION

C. D. SWEET, M.D., Chairman,  
242 Moss Avenue, Oakland.

ANDREW J. THORNTON, M.D., Secretary,  
405 Electric Building, 861 Sixth Street,  
San Diego.

Ebell Hall, Fourteenth and Harrison Streets,  
Friday, April 30, 2 to 4:30 p. m.

1. Chairman's Address: *The Postural Development of Infants, With Special Reference to the Development of the Function of Walking and Proper Shoeing*—C. D. Sweet, M.D., 242 Moss Avenue, Oakland.

Posture of the greatest importance to general health. With but few exceptions, the posture of normal infants is good. Later in childhood faulty posture is very common. Factors which cause this change: (a) Heredity. (b) Nutrition. (c) External forces, such as shoes, clothing, etc. If body is permitted to develop its mechanical resources, posture will be greatly improved. Normal body mechanics of walking will be illustrated.

2. *The Practical Value of the Intracutaneous Tuberculin Test*—Roland T. Seitz, M.D., Stanford Hospital, Clay and Webster Streets, San Francisco.

The intracutaneous tuberculin test was performed as a routine on about five hundred clinic children. The results of this test have been correlated with the histories, physical examinations, and roentgenograms of the chest. The local incidence of tuberculosis infection, so determined, is compared with that elsewhere.

3. *Review of Diabetes Cases in Children*—Francis Scott Smyth, University of California Hospital, San Francisco.

Study of diabetes mellitus cases admitted to the pediatrics ward of the University of California Hospital. Discussion of statistics of sex, age, onset, primary symptoms, predisposing causes, methods of treatment, and prognosis. Results of recent cases treated with insulin. Evaluation of diet and insulin as methods of treatment in children.

4. *Cleft Palate and Lip*—John Homer Woolsey, M.D., 907 Medico-Dental Building, San Francisco.

The importance of early treatment, based on the anatomical condition. The development, with growth and the physical effect on parents and friends. The need and value of post-operative instruction in phonation.

5. *Children's Dentistry*—Charles A. Sweet, D.D.S., Oakland (by invitation).

This paper will be an endeavor to bring to the

attention of the physician the possibilities of preventive dentistry, with a résumé of some of the late dental research and its practical application. Several cases will be exhibited and discussed which will be of special interest to the physician.

### UROLOGY SECTION

MILEY B. WESSON, Chairman,  
1275 Flood Building, 870 Market Street,  
San Francisco.

H. A. ROSENKRANZ, Secretary,  
1024 W. P. Story Building, 610 South Broadway,  
Los Angeles.

#### FIRST MEETING

Room 101, Hotel Oakland,  
Wednesday, April 26, 2 to 5 p. m.

1. Chairman's Address: *The Clinical Importance of Colles' and Buck's Fascia*—Miley B. Wesson, M.D., 1275 Flood Building, 870 Market Street, San Francisco.

This study is based upon four cases: Traumatic rupture of a varicocele with hemorrhage that was inclosed within Colles' fascia; three cases of abscessed glands of Littre, with urinary extravasation in Buck's fascia. The report supplements a previous investigation of the fascia of the urogenital triangle from the embryological, anatomical, and experimental viewpoints.

Discussion opened by R. V. Day, M.D., Detwiler Building, Los Angeles; F. S. Dillingham, M.D., 548 South Spring Street, Los Angeles.

2. *The Female Urethra*—William E. Stevens, M.D., 602 Flood Building, 870 Market Street, San Francisco.

Frequency with which urethral lesions are responsible for urinary symptoms. Anatomy of the female urethra and its relationship to pathological conditions. Examination of the urethra. Types and relative frequency of lesions encountered. Interesting cases under recent observation.

Discussion opened by Nathan G. Hale, M.D., Capital National Bank Building, Sacramento; Anders Peterson, M.D., 1136 West Sixth Street, Los Angeles.

3. *The Present-day Status of the Treatment of Sexual Impotence*—Victor G. Vecki, M.D., 301 Physicians Building, 516 Sutter Street, San Francisco.

Sexual impotence is not a special disease, but only a symptom of some or various pathological changes in the individual bodily system; each patient's bodily condition, family and personal history must be thoroughly examined and investigated; there is no medicine, no injection, no local proceeding, surgical operation or transplantation indicated in all, not even in most cases. The regulation of the sexual life is always imperative, and a function as important as the sexual function cannot be eliminated without impairing the function bearer.

Discussion opened by R. V. Day, M.D., Detwiler Building, Los Angeles; H. A. Rosenkranz, M.D., Story Building, Los Angeles; Melville Silverberg, M.D., 209 Post Street, San Francisco.

4. *Movable Kidney With Kink or Angulation Versus Ureteral Stricture*—Frank Hinman, M.D., F. A. C. S., 603-9 Fitzhugh Building, 384 Post Street, San Francisco; Morrell E. Vecki, M.D., and Clark M. Johnson, M.D., Department of Urology, University of California Medical School, San Francisco.

A comparative analysis of 232 cases of movable kidney with angulation or kink, and of 102 cases of ureteral stricture with reference to symptomatology and back pressure effects of the two conditions in the production of hydronephrosis (206 cases), and other factors that have been noted as causing supraventricular hydronephrosis. Discussion of the inherent conditions that cause marked variation in such comparative studies; variability of recognition of acquired and congenital factors; of primary and secondary factors and of upper and lower tract conditions; variability in individual interpretation of the above findings; in the peculiarities of individual

practice and in individual methods of examination. The need of standardization of methods in order that the above conditions may be more accurately understood and properly treated.

Discussion opened by Charles P. Mathé, M. D., 844 Phelan Building, San Francisco; S. E. DePuy, M. D., Dalziel Building, Oakland.

#### SECOND MEETING

Room 101, Hotel Oakland,  
Thursday, April 29, 2 to 5 p. m.

1. *Some New History and Examination Forms*—H. A. Rosenkranz, M. D., 1024 W. P. Story Building, 610 South Broadway, Los Angeles.

Discussion opened by R. L. Rigdon, M. D., 291 Geary Street, San Francisco; James R. Dillon, M. D., 490 Post Street, San Francisco.

2. *Hemorrhage in Urology*—Paul A. Ferrier, M. D., 65 North Madison Avenue, Pasadena, California.

Necessity of mastery of hemostasis; principles governing clotting; pathologic states affecting it; measures to restore it; calcium; sodium citrate; foreign albumins; coagulents; subcutaneous blood; transfusion. Adaptation of local methods of hemostasis to special urological problems; caustics; diathermy, radiations; spontaneous hemorrhage; surgical urological hemostasis; special operations.

Discussion opened by James R. Dillon, M. D., 490 Post Street, San Francisco; W. W. Cross, M. D., Dalziel Building, Oakland.

3. *Mortality and Histology in Cases of Renal, Vesical, and Prostatic Tumors*—A. J. Scholl, M. D., 721 Pacific Mutual Building, 523 West Sixth Street, Los Angeles.

Malignant tumors of the kidney, bladder, and prostate have constant, histologic characteristics that vary within certain limits for each organ. The correlation of these histologic variations with the post-operative results give a comparatively accurate index, which may be of value in determining the prognosis of similar cases. The histologic structure of the different types of tumors will be shown with lantern slides.

Discussion opened by Thomas E. Gibson, M. D., Flood Building, San Francisco; Elmer Belt, M. D., Pacific Mutual Building, Los Angeles.

4. *Analysis of Deaths Following Suprapubic Prostatectomy*—Albert M. Meads, M. D., 251 Moss Avenue, Oakland.

The great reduction in mortality following suprapubic prostatectomy in the last few years and the occasional report of a large series of cases without a death should stimulate all of us to analyze our mortality. Optimistic reports should not make us forget that there is a mortality following prostatectomy. The twenty cases studied have been viewed as to cause of death, and suggestions have been made as to eliminate such causes in the future.

Discussion opened by R. S. Rigdon, M. D., 291 Geary Street, San Francisco; George W. Hartman, M. D., 999 Hyde Street, San Francisco.

#### THIRD MEETING

Room 101, Hotel Oakland,  
Saturday, May 1, 2 to 5 p. m.

1. *Urinary Antiseptics*—George G. Reinle, M. D., 204 Dalziel Building, 532 Fifteenth Street, Oakland.

The search for practical urinary antiseptics is an old and as yet unsolved problem; consideration of various drugs and therapeutic measures tried today; what antiseptics are supposed to accomplish; oral, intravenous, and intra-ureteral medication, vaccines, and the place of each. Mechanical and other reasons as to why it does not seem probable any one therapeutic procedure will ever be sufficient to accomplish sterilization of the urinary tract.

Discussion opened by George L. Eaton, M. D., 909 Hyde Street, San Francisco; F. H. Redewill, M. D., University of California Hospital, San Francisco.

2. *Rupture and Perforating Wounds of Urinary Bladder*—J. C. Negley, M. D., 809 Haas Building, 219 West Seventh Street, Los Angeles.

Age of patients, etiology, whether from trauma

or forces within the organ, diagnosis—clinical, subjective and objective signs, cystoscopy, radiography. Prognosis: Depends on rapidity of diagnosis and appropriate operative procedure. Most cases going over twenty-four hours have fatal prognosis. Also depends on location of rupture, whether extra or intra-peritoneal. Treatment: Generally operative, and these procedures along well-defined lines. Some illustrative cases.

Discussion opened by William E. Stevens, M. D., Flood Building, San Francisco; Lloyd R. Reynolds, M. D., 291 Geary Street, San Francisco.

3. *Spontaneous Rupture of a Hydronephrotic Sac Secondary to Ureteral Stone*—Charles P. Mathé, M. D., and George F. Oviedo, M. D., 844 Phelan Building, 760 Market Street, San Francisco.

Occurrence. Pathology. Case report. Review of the literature. Signs and symptoms. Diagnosis. Surgical treatment, with relief.

Discussion opened by J. C. Negley, M. D., 809-816 Haas Building, Los Angeles; E. W. Beach, M. D., Elks Building, Sacramento, California.

4. *The Diagnosis of Adrenal Tumors*—Thomas E. Gibson, M. D., 738 Flood Building, 870 Market Street, San Francisco.

Adrenal neoplasms are generally unsuspected and undiagnosed. Consideration of the normal and abnormal physiology of the adrenals, and the relation between adrenal physiology and clinical manifestations. It is usually easy to differentiate between cortical and medullary tumors, the former occurring chiefly in adults, the latter in infants and children.

Discussion opened by Adolph A. Kutzmann, M. D., 1052 West Sixth Street, Los Angeles; Miley B. Weston, M. D., 1275 Flood Building, San Francisco.

5. *Ureteral Reflux*—James R. Dillon, M. D., 301 Medico-Dental Building, 490 Post Street, San Francisco.

Brief review of literature; report on experimental work to produce reflux in normal animals. Use of gravity reflux in pyelography, with catheters at various levels. Case reports. Conclusions.

Discussion opened by Louis Clive Jacobs, M. D., 462 Flood Building, San Francisco; S. P. Player, M. D., 380 Post Street, San Francisco.

#### TECHNICAL SPECIALTIES SECTION

RAY LYMAN WILBUR, Chairman,  
Stanford University, Palo Alto.

JOHN C. WILSON, Secretary,  
410 Medical Office Building, 1136 West Sixth Street,  
Los Angeles.

#### California Association of Medical Social Workers

EDNA J. SHIRPSER, President,  
Children's Hospital, San Francisco.

SOPHIE H. MERSING, Secretary,  
Mount Zion Hospital, San Francisco.

#### FIRST MEETING

Rose Room, Hotel Oakland  
Wednesday, April 28, 2:30 p. m.

1. President's and Secretary's Reports.
2. *Medical Social Service in Government Hospitals*—Miss Evelyn Z. Philps, Pacific Division American Red Cross, San Francisco.

Discussion—Major R. A. Davison, Letterman General Hospital, San Francisco.

3. *Work of the Cardiac Clinic*—Miss Sarah Robertson, Children's Hospital, Los Angeles.

4. *Advantages of Medical Social Service—Orthopedic Surgery*—Dr. George C. McChesney, Fitzhugh Building, San Francisco.

Discussion—Dr. Lionel D. Prince, Medico-Dental Building, San Francisco.

5. *Medical Social Worker and the Problem of Mankind*—Dr. Percy T. Magan, White Memorial Hospital, Los Angeles.

#### On What Financial Basis is Clinic Care Determined

Discussion led by Miss N. Florence Cummings, Stanford University Hospital, San Francisco; Dr.



William Dock, Stanford University Hospital, San Francisco; Dr. Fred Firestone, Mount Zion Hospital, San Francisco; Dr. Paul Castelhun, St. Luke's Hospital, San Francisco; Dr. Rudolph Dresel, Children's Hospital, San Francisco; Mrs. Ida T. Fleming, Children's Hospital, San Francisco; Mrs. Alice Keane, St. Luke's Hospital, San Francisco; Miss Josephine Abraham, Mount Zion Hospital, San Francisco; Miss Marcella Leonard, San Francisco Hospital, San Francisco.

#### 6. Business Meeting.

Round-table luncheon preceding program at 12:30 p. m., Hotel Oakland.

#### California Association of Physiotherapists

MISS BUELAH RADER, President,  
Marine Hospital, San Francisco.

MISS MABEL PENFIELD, Secretary,  
560 Sutter Street, San Francisco.

West Room, Hotel Oakland,  
Thursday, April 29, 2:30 to 5 p. m.

1. *President's Address*—Miss Buelah Rader, Marine Hospital, San Francisco.
2. Address by President of Technical Specialties Section.
3. Practical discussion of diathermy technique. Results, with case reports and x-rays. Bursitis, arthritis, back strains.  
Discussion opened by Miss Hazel Furscott.
4. Quartz lamp technique, with case reports. Examples of unsuccessful results. Eczema, bone and gland tuberculosis, skin ulcers, rickets.  
Discussion led by Miss Mabel Penfield.
5. *The Present Uncertain Status of the Physiotherapy Technician—Need for New Placement Bureau*—Miss Hilda Knazenberger, Hanneman Hospital, San Francisco.
6. Business Meeting.
7. Dinner.

#### ENTERTAINMENT

The Arrangements Committee for the Oakland meeting have planned a program of entertainment which all should enjoy.

On Monday, April 26, and Tuesday, April 27, there will be a golf tournament held at Sequoyah and Claremont Country Clubs, and this tournament will be conducted by the Northern California Medical Golfers' Association. Many trophies will be awarded at a dinner for the golfers, which will be held at the Claremont Country Club on Tuesday evening, April 27.

On Tuesday, April 27, the urologists of San Francisco and Oakland, under the auspices of the Western branch of the American Urological Association, will give a dinner and entertainment to visiting urologists at 6:30 p. m. at the St. Germain Restaurant, 60 Ellis Street, San Francisco.

On Wednesday afternoon there will be a reception at the home of Dr. Edward N. Ewer for the ladies.

Wednesday evening, April 28, there will be a dinner at the Hotel Oakland for optional medical defense.

Following the meeting of the House of Delegates on Wednesday evening there will be a smoker for the men. A musicale for the ladies will be held at the Hotel Oakland on the same evening.

On Thursday, April 29, in the afternoon, there will be a luncheon and cards at the Hotel Claremont for the ladies.

In the evening will be a dinner dance at the Hotel Oakland.

On Friday, April 30, at noon, there will be a luncheon at the Hotel Oakland for county officers and councilors.

In the afternoon the ladies will visit Orinda Country Club.

On Friday evening there will be a bridge tournament at the Hotel Oakland.

On Saturday, May 1, there will be a luncheon for the Program Committee.

### Utah State Medical Association

T. C. GIBSON, M. D., Salt Lake City.....President  
W. R. CALDERWOOD, M. D.....President-Elect  
FRANK B. STEELE, M. D., Salt Lake.....Secretary

J. U. GIESY, M. D., Kearns Building, Salt Lake,  
*Associate Editor for Utah*

#### THE COUNCIL ON PHYSIOTHERAPY, A. M. A.

To one who has employed, and employed with success, at least several of the agencies which may correctly be included under the general heading of physiotherapy, it is refreshing to read the recent article by Morris Fishbein (*Journal A. M. A.*) on the work, aims, and scope of the Council on Physiotherapy, as well as to know that in the future the journal is to give some space to articles dealing with the possibilities of treatment by physiotherapeutic means.

No physician but must welcome the stand now being taken toward the establishment of a true field for the use of such means for the relief of certain conditions constantly met in our efforts to give suffering humanity relief.

Physiotherapy, like any newborn infant, has had a somewhat stormy infancy; but here at last it appears that we are at least on the threshold of getting on a definite footing with it. In other words, the child is beginning to walk and talk, and has, in a sense, cut its teeth.

But what we want mainly to see is the establishment of a true ethical basis for those men of sincere purpose who sincerely believe from experience that there is a real benefit to be derived from the use of such agencies in the treatment of certain maladies.

Electricity, for instance, in its various applications is no cure-all. Yet it will work positive changes when properly used. Like any other means of treatment, it should be understood by him who seeks to use it, both in its nature and its indicated application. In other words, electricity should and must be *prescribed* in an understanding fashion before it can be accredited by any scientific standards or justification of use.

None knows better than one who has seen the recent renewed interest in the subject how widely certain commercial agencies have overshot the mark in the claims they have made. Herein we are called upon to draw the line between science and the commercial boosting of trade. Selling-talks are naturally optimistic, and the salesmen of equipment houses are quite naturally required to be optimists, to use the very mildest word.

On the other hand, there is truth as a basis for some of their claims, as we know from our own experience; and now that the Council has been given official cachet to step in, we can welcome their activities as tending to winnow the wheat from the chaff and establish the accredited use of what is good, in contradistinction to the claims of salesmen, charlatans, and the cults.

For there is wheat among the chaff. The results

obtained in traumatic injuries, in developmental disturbances, in the rehabilitation of injury cases for a return to useful service, speak for themselves. Finsen practically put physiotherapy on its first legs. Rollier has worked miracles of healing in the Swiss Alps. England has carried forward a steadily onward progress with the use of such methods since the year before Finsen's death. Columbia University has recently recognized the subject as one to be taught. The American Electrotherapeutical Association has been a society composed of learned and scientific men for over thirty years. Modern workers on this side of the water have carried the work rapidly forward the last few years. The United States Army Medical service uses physiotherapy as a routine in its general hospitals. So surely, surely the wheat is there, for all these agencies working to prove it are scarcely of a type to be easily or continually fooled.

### PROGRAM ANNUAL SESSION

Thursday, May 6, 1926

Morning Session—8 o'clock, Meeting of the Council. 9 o'clock, Cretinism and Its Relation to Thyroid Disease (Motion Pictures), Charles C. Tiffin. 10 o'clock, Cancer of the Sigmoid and Rectum (Lantern Slide Demonstration), Leo P. Bell. 11 o'clock, Gastro-intestinal Disorders and Nervousness, Edmund Jacobson. 12 o'clock, Meeting of the House of Delegates.

Afternoon Session—2 o'clock, Surgery of the Large Intestine, Leo P. Bell. 3 o'clock, Endometrial Cysts as a Cause of Dysmenorrhea, P. L. Pratt. 4 o'clock, Goiter Clinic (Dry), E. P. Sloan. 5 o'clock, Meeting of the House of Delegates.

Friday, May 7, 1926

Morning Session—8 o'clock, Surgical Clinic (Dry), R. C. Coffey. 9 o'clock, Alkaline Tide in Achlorhydria, R. H. Hubbard. 10 o'clock, Internal Secretion of the Ovary, J. P. Pratt. 11 o'clock, Some Technical Points in Medical, X-ray, and Surgical Treatments of Goiter, E. P. Sloan. 12 o'clock, Meeting of the House of Delegates.

Afternoon Session—2 o'clock, The New Treatment of Functional Nervous Conditions and Its Relation to Internal Medicine, Edmund Jacobson. 3 o'clock, Cosmetic Surgery of the Thyroid Gland Under Local Anesthesia, Charles C. Tiffin. 4 o'clock, The Present Situation in Cancer Research, H. Gideon Wells. 5 o'clock, subject to be announced later, A. J. Carlson.

Evening—8 o'clock, banquet, Hotel Utah.

Saturday, May 8, 1926

Morning Session—8 o'clock, The Influence of Heredity on the Occurrence of Cancer in Man, H. Gideon Wells. 9 o'clock, subject to be announced later, A. J. Carlson. 10 o'clock, Fundamentals of the Ptoxis Question, Robert C. Coffey. 11 o'clock, Does Neurasthenia Exist? Edmund Jacobson. 12 o'clock, luncheon.

Afternoon Session—2 o'clock, Some Functional Studies in Nephritis, Roger S. Hubbard. 3 o'clock, subject to be announced, A. J. Carlson. 4 o'clock, Cancer Statistics, H. Gideon Wells. 5 o'clock, Treatment of Gastro-Duodenal Ulcer, Robert C. Coffey.

Note: The Ophthalmological Section Program was not completed in time for publication, but will be announced later.

**Utah News**—Work has started on the new Medical Arts building in Salt Lake. We wonder just how many people, how many physicians fully realize the importance of the announcement or its scope. People driving by the site now see but a board fence. In a few months they will see a modern office building of ten stories, designed and planned to accommodate exclusively members of the medical and dental professions, equipped with every modern facility of their needs.

In this structure there will be, besides the ground floor housing mercantile institutions of a nature closely allied with the medical and dental arts, a tea room for hasty lunches, a barber shop and beauty parlor, a lecture auditorium equipped with platform and projection chamber—

open to the county and state societies or other societies desiring its use—a reference library, and nine floors of modern offices.

Sponsored in its inception by the county society, the actual and tangible materialization of this project is due mainly to the efforts of Drs. Ford and Stauffer, E. F. Root, H. P. Kirtley, and one or two other men closely associated with them from the first. To it they have given time without limit, and money in no small measure. Today we see their efforts crowned by an assured success. This building will go up with an assured list of tenants, with every foot of floor space—commercial and professional—rented before the superstructure is raised. Merchants, bankers, and men of good business judgment have absorbed the entire issue of preferred stock. One feels tempted to suggest to the profession of Salt Lake that following their lead it were well for them to give to this enterprise their whole good-will and friendly support, because, all reports to the contrary—and there have been some circulated as it would appear—the Medical Arts building is—GOING UP!

The war is over! Along about June many of the members of the profession in Utah will realize it when remitting \$1 instead of three for renewal of their narcotic privilege. But then at the same time there is an increase of the tax on near beer and all legal cereal beverages.

The sympathy of the profession is, we feel, turning toward Dr. A. A. Kerr of Salt Lake in the death of his brother, Dr. Norman Kerr of Chicago. Dr. Kerr went on to Chicago for the purpose of attending the funeral services upon receipt of the news of his brother's death.

Dr. H. Earl Belnap has been named Weber County Health Commissioner by the county commissioner of the health unit.

Dr. Charles P. Hough, 81, died in Missouri recently. Dr. Hough was a resident of Salt Lake for six years, from 1896. He was prominent in medical circles of the state, and left in 1902 to return to his home town, Jefferson City, Mo.

**Salt Lake County Medical Society News** (by M. M. Critchlow, secretary)—The meeting of February 22 was devoted to medico-military matters. Forty members and eleven visitors were present. Fourteen members were in uniform.

Colonel S. C. Baldwin, C. O. General Hospital No. 61, gave a report on that hospital, naming the personnel. Colonel C. M. Benedict, C. O. Station Hospital No. 136, gave a report in which he outlined the functions of his organization.

Major S. C. Gurney read a paper on "The Development of an Efficient Medical Service in the Army of the United States for Emergency." He discussed the difficulties of 1917 National Defense Act and the present organization of the army, qualifications required for membership in the Reserve Corps, and outlined the advantages of the Reserve officers over the volunteers and drafted men.

Major C. L. Sandberg, C. O. Hospital Train No. 1, reported for his organization. Lieutenant J. Gregg Smith, United States Navy, read a paper on "The Medical Corps of the Navy—What It Offers a Medical Man." He outlined the work done in the navy, opportunities for research, and the advantages of the naval service.

Lieutenant T. A. Flood read an excellent paper on "Army Life and the Development of Personality." In the absence of Lieutenant-Colonel Willard Christopher, C. O. 329th Medical Regiment, Major S. C. Gurney reported for that organization.

Lieutenant-Colonel H. P. Kirtly suggested that the papers read should be forwarded to CALIFORNIA AND WESTERN MEDICINE for publication. Major J. U. Giesy announced that the Journal is devoting a department to the Reserve Corps, and that he would be glad to forward the articles mentioned to Dr. Musgrave, editor of this Journal. Major L. N. Ossman suggested that all papers read before the society should be forwarded to the Journal for publication. Discussed by Major Giesy, who announced his willingness to do this.

The application for membership of Eugene L. Christensen was read.

President Raley requested all members to get their parking privileges early. He announced that twenty-six doctors were in arrears and urged them to pay their dues.



He also announced that delegates would be elected at the next meeting, and announced the replies to the telegrams sent to Senators Smoot and King.

The meeting of March 8 was called to order by President F. H. Raley. Forty-three members and two visitors were present.

Mr. W. H. Adams, representing the Commercial Club, addressed the society relative to the Intermountain Livestock Show to be held in North Salt Lake March 27 to 31, 1926, inclusive.

The scientific program was arranged by the Utah Ophthalmological Society.

H. G. Merrill of Provo, Utah, gave an illustrated talk entitled "A Squint Into the Eye Business." He described the mechanism and treatment of a squint, emphasized the necessity of early treatment and demonstrated four cases, two of which illustrated perfect results from early treatment, the other two being blind in one eye from lack of treatment. Discussion by D. H. Henderson, E. D. Le Compte, Fred Stauffer, and John Z. Brown.

Fred Stauffer read a paper entitled "Some 'Dont's' in the Ear, Nose, and Throat Practice." He discussed tonsillitis, earaches, and sinus infection. He illustrated with lantern slides the anatomy of the sinuses.

Eugene Christensen was unanimously elected to membership in the society.

The application of P. G. Holman was read and turned over to the Board of Censors.

The following members were elected delegates to serve two years: H. P. Kirtley, S. C. Baldwin, E. M. Neher, Sol G. Kahn, L. J. Paul, M. M. Critchlow, Joseph E. Jack, L. E. Viko, W. L. Rich, E. F. Root, Helmina Jeidell, J. N. Harrison.

The following members were elected alternates to service for one year: W. F. Beer, Ralph Pendleton, M. M. Nielson, Warren Benjamin, W. C. Cheney, Scott A. Jones.

### Nevada State Medical Association

A. J. HOOD, M. D., Elko.....President  
HORACE J. BROWN, M. D., Reno.....  
.....Secretary and Associate Editor for Nevada

Vinton A. Muller, Gray-Reid Building, Reno, is chairman of the Nevada Program Committee this year. He is actively at work upon the program for 1926, and will be glad to hear from those who have something to offer.

The Washoe County Medical Society met March 10 in the office of John A. Fuller, secretary.

Mrs. Patrick presented a plan for a nurses' directory, whereby she would list all nurses, both trained and practical. This, if supported by the physicians of the community, would centralize the several bureaus into one. The society voted to adopt the plan.

A communication from the American Birth Control League was read, offering to include this society in the itinerary of Dr. James F. Cooper, who is lecturing on birth control. The society voted to accept the offer, and instructed the secretary to communicate with the A. B. C. League.

Upon motion of Dr. Bath, it was voted that at the time of Cooper's lecture we give a banquet to members and visitors. Arrangements referred to a committee composed of Bath and M. A. Robison.

Dr. Bath read a paper on "Gonorrhea in Women." It was a masterly résumé of the subject. He dwelt especially on the pelvic complications and upon the difficulties of diagnosis. The paper was widely discussed.

Dr. Walker gave a short but instructive talk on "Sex Hygiene," bringing out some rather unpleasant facts regarding the high school children of this and other towns. He blamed the conditions on lack of adequate home education and mutual understanding between parent and child. This talk called forth considerable discussion.

The secretary brought before the society the matter of getting behind the movement of the A. M. A. Committee on Lye Legislation. This committee is fostering a bill in the United States Senate to properly label all poisonous substances used in the household, such as lye,

acids, etc. The secretary was instructed to wire the Senators and Congressmen, urging them to support the bill.

Dr. Piersall moved that in the near future one meeting night be given over to the discussion of the subject of periodic public health examination. Carried.

Attendance—Members: DaCosta, Bath, McIntyre, Stadtherr, W. H. Hood, Walker, Morrison, Piersall, Blake, Crevaling, Lehnners, Albert, Fuller, Brown, Muller, M. A. Robison, Samuels, and Caples. Visitors: Dr. Henry.



STANLEY STILLMAN

President Pacific Coast Surgical Association

The Pacific Coast Surgical Association met this year (February 26-27) at Del Monte. The regular two-day session was preceded by a series of clinics held in San Francisco hospitals. The president's dinner was held on Saturday evening. Dr. Horace Wetherill of Monterey, former president of the Western Surgical Association, acted as toastmaster, and the following surgeons spoke: Thomas W. Huntington, San Francisco; Franklin Martin, Chicago; Charles D. Lockwood, Pasadena; Stanley Stillman, San Francisco; J. Tate Mason, Seattle, and T. Saxton Pope, San Francisco. The following officers were elected for the ensuing year:

Stanley Stillman, San Francisco, President; Ernst A. Sommer, Portland, Oregon, First Vice-President; W. D. Kirkpatrick, Bellingham, Washington, Second Vice-President; Edgar L. Gilcreest, San Francisco; Secretary.

The association will convene the last week in February of next year in Del Monte.

The retiring officers of the association who conducted the very successful meeting are:

Charles D. Lockwood, Pasadena, President; Stanley Stillman, San Francisco, First Vice-President; Wallace I. Terry, San Francisco, Second Vice-President; Edgar L. Gilcreest, San Francisco, Secretary.

Council—J. Tate Mason, Seattle; Harold Brunn, San Francisco; Philip K. Gilman, San Francisco; Paul Rockey, Portland; Clarence G. Toland, Los Angeles.

Horace G. Wetherill, Monterey, was in charge of arrangements.

## Medical, Health and Health Agency News

**Scripps Memorial Hospital**—On Tuesday, February 23, the active staff of the Scripps Memorial Hospital held its regular monthly meeting at the San Diego County General Hospital. Interesting detailed clinical reports on all cases that had died in the institution were made by the physicians who attended the cases. Discussions on such cases is planned as one of the policies of the hospital. It is the purpose of this staff to hold some of its meetings at places more convenient to the majority of its members than the Scripps Hospital itself.

**The St. Francis Hospital Clinical Society**, at its meeting of February 26, presented the following program to a large audience:

The Present Status of the Angina Operation, With Results of Last Twelve Cases—Walter B. Coffey.

Diagnosis and the Medical Care of Angina—Philip King Brown.

The Treatment of Leukemias, With Report of Five Cases—W. J. Cummins and Philip King Brown.

**Stanford University Medical School**—The registration of the medical students in the different classes during the winter quarter is as follows: First year, 46; second year, 47; third year, 35; fourth year, 28; student interns, 27; total, 183.

The Medical School has received from Adolph Barkan, Professor Emeritus of Structure and Diseases of Eye, Ear, and Larynx, an additional donation of \$1000 for the historical collection of the Lane Medical Library.

The forty-fourth series of Popular Medical Lectures under the auspices of the Medical School has the following program:

January 8—Dietary Peculiarities of Children—H. K. Faber.

January 22—Skin Disturbances From Foods and Drugs—H. E. Alderson.

February 5—Ductless Glands and Obesity—Hans Lissner.

February 19—Gastro-intestinal Disturbances and Nutrition—P. K. Brown.

March 5—Fatigue and Rest—Professor E. G. Martin.

March 19—On the Prevention of Disease—G. E. Ebricht, President California State Board of Health.

The University received \$1000 from Dr. Morris Herzstein for the establishment of a lectureship on the diseases of the Pacific Basin.

The Medical School also received \$2000 from Mr. Roy N. Bishop, in support of the research work done by Dr. Addis.

Dr. George B. Somers, Clinical Professor of Gynecology and Physician Superintendent of Lane and Stanford Hospitals, died of lethargic encephalitis on February 20, 1926, at his home at Woodside. An appreciation of Doctor Somers and his work will be found elsewhere in this issue.

The faculty of the Medical School has decided to reorganize the teaching in the clinical years in such a way that the third year medical students will work in the hospital wards where they will obtain thorough practical training in the investigation of patients. During the fourth year they will serve in the out-patient department, where they will be given as much responsibility as possible and will learn to deal with the individual patients. During the fifth or compulsory intern year they will return to the hospital.

**The University of California Medical School**, San Francisco, offers courses for qualified graduates in medicine during a summer term lasting from June 7 to July 3. Applicants have the following to choose from:

General medicine, pediatrics, gastro-intestinal diseases, dermatology, syphilology, radium therapy, general surgery, orthopedic surgery, otorhinolaryngology, ophthalmology, genito-urinary diseases, surgical pathology, radiology,

obstetrics and gynecology, circulatory diseases, laboratory diagnosis, neurology, and neuropsychiatry.

Doctor Eugene S. Kilgore is director of graduate courses.

The graduation exercises of the 1926 class, Franklin Hospital School of Nursing, was held at the Fairmont Hotel on Saturday evening, February 27. A dance followed the ceremonies.

Rev. Frederick W. Clampett, D.D., former pastor of the Trinity Episcopal Church, and wartime chaplain of the Grizzlies, was the chief speaker of the occasion.

The presentation of diplomas was made by Mr. A. H. Muller, President of the Training School Board, and the address of welcome was given by Mr. Walter Loewy, President of the Board of Directors of the hospital.

Those in the graduating class were: Oma Armstrong, Dorothy Baker, Nellie Burdick, Halleck Clark, Ruth Earlye, Harriet Emery, Olive Gray, Ida Hallum, Elizabeth Hardwick, Mary Kennedy, Henrietta Samuels, Mabel Sheppard, Margery Snow, Bessie Stone, and Marie Stromberg.

As each graduate received her diploma, the official Franklin Hospital emblem was pinned upon her.

**St. Joseph's Hospital Staff, San Francisco**, met March 10, A. S. Musante presiding. Case histories were presented by Drs. Louis Overstreet (pulmonary tuberculosis), T. I. Janes (ruptured gall-bladder and appendix), Edmund Butler (hemiplegia), O. Laist (apoplexy), and Samuel Barmak (embolism, breast cancer, alcoholism, and burns).

Vice-President Frank Lowe introduced the special speakers, the first being O. E. Eklund, who spoke on the "Anatomy, Physiology and Surgery of the Capillaries," which was discussed by W. T. Cummins.

Ethan Smith read a paper on the "After-Treatment of Infantile Paralysis," the following being stressed:

No electric current of any kind should be used at any time, for any purpose in the treatment of infantile paralysis. This is based on physiological fact. In order to secure a contraction of a partially paralyzed muscle, any current would have to be of such intensity that it still further damages the muscle. Gentle massage and passive exercise, after the acute symptoms have subsided and the patient can be handled without pain, may be used with benefit. Rest in bed—for some weeks in severe cases—is best. Distortion and deformity should be prevented from the beginning by the use of light, well-padded splints; well-padded, light-weight plaster of paris dressings or small pillows and, if necessary, sand bags, to keep them in place. Patients may be allowed to walk with plaster of paris on the lower limbs as soon as reasonable recuperation has taken place in those parts. Patients should not be compelled or permitted to try to walk without proper braces until the muscles have sufficiently recovered, so that the patient can walk with reasonable comfort. Trying to compel a patient to walk without proper braces on partially paralyzed limbs is a damage for obvious reasons unnecessary to mention. Operations on muscles or tendons should never be done until all possible recuperation has taken place in the affected muscles. Much irreparable damage is being done by ill-timed operations in these cases.

For the meeting on April 7 the feature announced was "Clinical Types of Arteriosclerosis," by R. M. H. Berendt; discussion to be opened by P. K. Brown.

"About a year ago the San Jose Hospital Association," writes John Hunt Shephard, "decided to put on an annual course of lectures. We consider ourselves very fortunate in being able to get William Carpenter MacCarty of the Mayo Foundation to give our first course.

"During his week's stay with us he spent the mornings at our various hospitals. During these visits he gave us valuable suggestions. Each day a small group of the doctors would entertain him at luncheon, and the afternoons were spent in showing him and his wife the surrounding country. A different small group gave a dinner for them each evening. These small gatherings made it possible for a great many of the physicians to become better acquainted with Dr. and Mrs. MacCarty, and I



am sure added greatly to the enthusiasm of the meetings. Although it never rained harder in San Jose than it did the last two nights of his lecture, the attendance did not fall off. The entire profession are loud in their praise of the undertaking, and at a meeting of the association last evening it was voted to make such an event an annual affair. A suitable name for these lectures will later be adopted.

"Dr. MacCarty gave the following lectures: Tuesday evening, February 9, The Cancer Cell and Nature's Defensive Mechanism; Wednesday evening, Gastric Ulcer and Cancer of the Stomach; Thursday evening, Bone Tumors; Friday evening, The Biological Conception and Classification of Neoplasms and Diseases of the Gall-bladder.

"Between thirty and forty physicians from the San Francisco bay district attended the lectures."

**St. Luke's Hospital**—The regular meeting of St. Luke's Hospital Clinical Club was held on Thursday, March 4, at noon, Dr. Rosburg introducing the speaker of the day, Thomas E. Gibson, who spoke on "The Diagnosis of Adrenal Tumors." The adrenals were first discussed from the viewpoint of normal and abnormal physiology, a very comprehensive classification under the latter heading being given.

Among the conclusions drawn by Gibson from his intensive study of the subject were the following: A differential diagnosis of adrenal tumors can be made, as a rule, by their clinical manifestations, a urological investigation in addition being of decided value.

Cortical tumors of the adrenal produce characteristic changes in the sexual sphere, the change in both sexes being toward the adult male type; they may occur at any age, being as frequent in infancy and childhood as in adult life.

The common tumor of the cortex is carcinoma (adrenal hypernephroma).

Pigmentation occurs in cortical tumors in only a small percentage of cases, and never in medullary tumors. Hypertension appears to be a fairly constant symptom, particularly in the young.

The common medullary tumor of the adrenal is the "neurocytoma" or sarcoma. It is of two types—the Hutchinson and the Pepper—the first being characterized by early metastasis to the orbit, usually to the side on which the tumor is located, the second by rapid enlargement of the abdomen, due to metastasis to the liver.

The prognosis is almost invariably bad and the course rapid. Treatment is purely surgical.

The comparative rarity of their incidence brought out the interesting statistical fact that out of 46,265 admissions at the University of California Hospital, between July, 1913, and January, 1926, but eight were recorded as adrenal tumors, and but three were proved primary adrenal tumors.

**Morris Herzstein Lectureship**—The first course of two lectures under the Morris Herzstein Lectureship on diseases of the Pacific Basin, including tropical diseases, will be given by Dr. Henry S. Houghton, the director of the Peking Union Medical College, and an authority on tropical diseases, during the week beginning April 25, at Lane Hall of the Stanford University Medical School, Sacramento Street near Webster, at 8 p. m. Monday, April 26, and Wednesday, April 28, have been tentatively selected as the dates for the lectures.

Dr. Houghton's first lecture will be a discussion of the setting of Western medicine in Asia, and its significance in the promotion of international well-being from various points of view. His second lecture will be a more detailed and specific talk on noso-geography and on the work that is being done in China. The medical profession and all medical students are cordially invited to attend these lectures.

When I have one of Harvard's robust graduates come to me and loudly say, "I am a red-blooded man; I want to know why the football team doesn't win," I cannot help recalling what the physiologists say—that human blood is most red where it has not been through the brain.—President Lowell of Harvard.

## READERS' FORUM

Selected short letters and abstracts from longer communications from readers are published when they remain within the bounds of decorum and law and contribute anything of value. Hereafter the name and address of the writer will be given. A pen name will be published on the author's request, and letters to the editor not intended for publication should be marked "personal."

Langley Porter, who has been abroad for the past year, recently registered in England, using his F.R.C.S. as credentials.

Shortly thereafter he received from the British Medical Association a letter (evidently sent to all new registrants) that contains so much food for reflection that much of it is reproduced without further comment:

1. At the outset of your professional career we wish to extend to you a very warm invitation to become a Member of the British Medical Association. We do so with the more confidence because the Association offers its members not only certain material advantages, but an opportunity of service to the profession and to the public. The following paragraphs are intended to give you the grounds upon which we base this claim, and also a general idea of the nature and scope of the work of the Association.

2. Every profession and calling has found it essential to have an organisation. The stronger the organisation, the higher the status and influence of that calling. Amongst such professional associations the British Medical Association stands in the first rank, whilst within the medical profession there is no organisation which can compare with it for size or influence. It has Divisions and Branches all over the Empire; has already a membership of over 30,000; and aims at enrolling every reputable member of the profession.

3. Thus by joining the Association you will become a member of a world-wide organisation. Wherever you may go in the British Empire you will find yourself a Member of a local unit of the Association, and the very fact of your membership will indicate to the practitioners amongst whom you settle that you are prepared to play the game, and so serve as an introduction to useful and agreeable acquaintanceships.

### ACTIVITIES OF THE ASSOCIATION

4. One of the main objects of the Association is the advance of the science and art of medicine. To this end the Association publishes the British Medical Journal, which, as one of the leading Medical Journals of the world, is essential to all who desire to keep abreast of current knowledge in the fields of medical work. In addition, the Journal contains a Supplement which deals weekly with matters of economic and medico-political interest. Members of the Association receive the Journal and the Supplement free each week, and it is cheaper to obtain it in this way than to buy it through trade channels.

5. A jealous watch is kept on all advertisements offered for publication in the Journal, to ensure that no principle laid down by the Association is infringed. Advertisements which are unsatisfactory from this point of view are refused. This is particularly important in connection with advertisements of appointments which do not offer the conditions considered necessary by the Representative Body of the Association in the interests alike of the profession and of the individual practitioner.

6. For the stimulation of individual research the Association awards a considerable sum annually in respect of research scholarships and grants. It has also a Library containing over 30,000 volumes, including every important new medical work in the English language. Members can borrow books in all branches of medical literature and general science from the Lending Department of the Library on payment of postage, and they are also entitled to free use of the Library, where they may write or receive personal letters.

7. The Association holds Annual Meetings at which papers by Members eminent in their various subjects are read and discussed, and as a Member of the Association you will be entitled to attend these meetings and take part in the discussions. Not only do the Annual Meetings

deal with matters of scientific importance, but they are also a means of bringing you socially into contact with your professional colleagues.

8. Whatever branch of professional life you decide to pursue, you will find the Association watchful and active on behalf of its Members. For example, the Association has secured great advantages for Insurance practitioners and is vigilant as to the interests of its Members who are in the service of Local Authorities, the Services, or similar bodies. The special interests of newly qualified practitioners are continually under review by means of a Committee.

9. The Association is recognised by the Government and Local Authorities as the representative organised body of the profession. Its business is to protect the interests of all medical practitioners and speak and act in their name.

10. The Association has an expert staff whose advice and help are at your service, and who, under the direction of the Council and the Committees of the Association, carry on, in co-operation with the Honorary Officers of the Divisions and Branches of the Association (of whom there are several hundreds), the work of organising the profession throughout the Empire.

11. The local units (Divisions and Branches) meet for social and scientific purposes and also to discuss questions of medical policy, both local and general, and as a Member you will be able to influence these discussions and decisions by your voice and vote.

12. There is no organisation more democratic than the British Medical Association, and none which is more ready to welcome members who desire to work for the good of the profession. It offers the individual practitioner more opportunity of influencing medical politics than does any other existing medical organisation. You may hear unfavourable criticism of the Association, but you will generally find that it comes from people who have never themselves done any work in the interests of the profession, and are not even content to let others do it.

#### NEW CENTRAL HOUSE OF THE ASSOCIATION

13. Owing to the steady increase of its membership and of its work for its Members, collectively and individually, the Association has found it necessary to secure larger premises, situated in Tavistock Square, W. C. 1. In the new building recently opened by His Majesty the King, various new facilities are being provided for the convenience and comfort of Members, including something in the way of club accommodation.

## M. O. R. C.

**Ninth Corps Area—California, Nevada, Utah, Wyoming, Montana, Idaho, Washington, Oregon, and the territory of Alaska.**

Salt Lake County Medical Society held an enthusiastic Medico-Military meeting recently. Many of the members appeared in uniform.

Reports were made by Colonel S. C. Baldwin on General Hospital No. 61; Lieutenant-Colonel C. M. Benedict on Station Hospital No. 136; Major C. L. Sandberg on Hospital Train No. 1, and Major S. C. Gurney on Medical Regiment No. 329.

Papers were read by S. C. Gurney, J. Gregg Smith, and T. A. Flood. The society is much interested in the M. O. R. C. movement. They have semi-monthly study meetings—under Major Gurney—which are well attended, and they are making provisions for an annual Medico-Military meeting.

Salt Lake City and the state of Utah are in the lead in M. O. R. C. matters. Colonel E. L. Munson reports that "if all states did as well as Utah the M. O. R. C. would be oversubscribed."

The following-named Medical Corps reserve officers are assigned to the units as indicated below and to duty within the units as indicated after their respective names:

#### To General Hospital No. 30, Communications Zone:

Major Stanley E. Straube, U. S. V. Hosp. No. 102, Livermore, Calif., as Assistant to Chief of Medical Service.

First Lieutenant Edward A. Amaral, Milpitas, Calif.,

(Temp. Add. until July 1, 1926, St. Mary's Hosp., St. Louis, Mo.), as Medical Ward Officer.

First Lieutenant Frederick H. Olberg, Redwood Coast Hosp., Ft. Bragg, Calif., as Medical Ward Officer.

First Lieutenant Samuel B. Randall, University Hospital, San Francisco, Calif., as Medical Ward Officer.

First Lieutenant Kenneth H. Sutherland, San Luis Obispo, Calif., as Medical Ward Officer.

#### To General Hospital No. 35, Communications Zone:

Major John F. Chapman, 1070 North Chester Avenue, Pasadena, Calif., as Assistant to Chief of Surgical Service.

Major Edward D. O'Neill, First National Bank Building, Whittier, Calif., as Assistant to Chief of Surgical Service.

Major Charles M. Tinney, U. S. V. Hospital No. 64, Camp Kearney, Calif., as Roentgenologist.

#### To General Hospital No. 46, Communications Zone:

Major Frederick E. Diemer, 301 Medical Dental Building, Los Angeles, Calif., as Roentgenologist.

#### To General Hospital No. 47, Communications Zone:

Lieutenant-Colonel James F. Percy, 1030 South Alvarado Street, Los Angeles, Calif., as Chief of Surgical Service.

Major Neville E. Stewart, U. S. V. Hospital No. 24, Palo Alto, Calif., as Assistant to Chief of Surgical Service.

Major Frank M. Whiting, 322½ Myers Street, Oroville, Calif., as Roentgenologist.

#### To General Hospital No. 138, Zone of the Interior:

Major John Y. Bartholomew, 602 Funston Avenue, San Francisco, Calif., as Assistant to Chief of Medical Service.

Major Gordon L. McLellan, 932 106th Avenue, Oakland, Calif., as Assistant to Chief of Surgical Service.

Major Ernest E. Wilson, 916 The Alameda, Berkeley, Calif., as Roentgenologist.

First Lieutenant William H. Jones, 64 Broadway, Los Gatos, Calif., as Medical Ward Officer.

First Lieutenant Ernest E. Myers, 800 Church Street, San Francisco, Calif., as Medical Ward Officer.

First Lieutenant George B. Setzler, 311 Middlefield Road, Palo Alto, Calif., as Medical Ward Officer.

First Lieutenant James M. Sullivan, 3116 Sixteenth Street, San Francisco, Calif., as Medical Ward Officer.

#### To General Hospital No. 139, Zone of the Interior:

Major Claude E. Piersall, 17 North Virginia Street, Reno, Nevada, as Roentgenologist.

#### To General Hospital No. 140, Zone of the Interior:

Lieutenant-Colonel Fred C. Shurtleff, 709 Brockman Building, Los Angeles, Calif., as Chief of Surgical Service.

Major Jesse M. Burlaw, 800 North Broadway, Santa Ana, Calif., as Assistant to Chief of Surgical Service.

Major John S. Fox, 1922 Crenshaw Boulevard, Los Angeles, Calif., as Executive Officer.

Major George S. Murphy, 6677 Venice Boulevard, Culver City, Calif., as Assistant to Chief of Surgical Service.

Major Alfred R. Rogers, 966 South Wilton Place, Los Angeles, Calif., as Assistant to Chief of Surgical Service.

Major Earl H. Welcome, Downey, Calif., as Assistant to Chief of Medical Service.

Captain Elmer J. Lambert, 1001 Chapman Building, Los Angeles, Calif., as Medical Ward Officer.

Captain John S. McAtee, 1800 West Sixth Street, Los Angeles, Calif., as Medical Ward Officer.

Captain Seth H. Miles, Olive View, Calif., as Medical Ward Officer.

Captain Edwin R. Scarboro, P. O. Box 752, Lindsay, Calif., as Surgical Ward Officer.

Captain Preston W. Whitaker, 762 Friar Street, Van Nuys, Calif., as Medical Ward Officer.

First Lieutenant Nelson D. Widmer, Ninth and San Antonio Avenues, Upland, Calif., as Medical Ward Officer.

#### To General Hospital No. 142 (La Garde), Zone of the Interior:

Lieutenant-Colonel Ralph Hagan, 758 South Lake Street, Los Angeles, Calif., as Chief of Surgical Service.

Lieutenant-Colonel Elliott P. Smart, Olive View Sanatorium, Olive View, Calif., as Chief of Medical Service.

Major Walter E. Cary, 1156½ West Twenty-fifth Street, Los Angeles, Calif., as Assistant to Chief of Medical Service.

Major Guy F. Robinson, U. S. V. Hospital No. 64, Camp Kearney, Calif., as Executive Officer.

Major Arthur E. Shappell, 3529 Roseview Avenue, Los Angeles, Calif., as Assistant to Chief of Surgical Service.

Major Robert G. Sharp, 4235 Jackdaw Street, San Diego, Calif., as Assistant to Chief of Medical Service.

#### To General Hospital No. 143, Zone of the Interior:

Major Neils P. Paulsen, 31 West First Street, Logan, Utah, as Assistant to Chief of Surgical Service.

Major Frederick W. Taylor, 147 South University Avenue, Provo, Utah, as Executive Officer.

#### To General Hospital No. 144, Zone of the Interior:

Lieutenant-Colonel Harry N. Mayo, 615 W. P. Story Building, Los Angeles, Calif., as Chief of Surgical Service.

Major John P. Gilmor, 368 Spreckels Building, San Diego, Calif., as Assistant to Chief of Surgical Service.

Major Charles N. Greusel, P. O. Box 52, San Bernardino, Calif., as Assistant to Chief of Surgical Service.

Major John A. Hale, 6110 Eileen Street, Los Angeles, Calif., as Executive Officer.

Major Henry H. Koons, 1122 Lake street, Los Angeles, Calif., as Assistant to Chief of Medical Service.

Major Philip C. Means, 103 East Micheltorena Street, Santa Barbara, Calif., as Assistant to Chief of Medical Service.

#### To Eighty-first Evacuation Hospital, Third Army:

Captain Franz H. Brandt, 256 South Arden Street, Los Angeles, Calif., as Surgical Ward Officer.

#### To Eighty-ninth Evacuation Hospital, Sixth Army:

Colonel Henry W. Hoagland, 528 Pacific Southwest Bank Building, Pasadena, Calif., as Commanding Officer.



Captain Donald B. Garstang, 957 Gramercy Drive, Los Angeles, Calif., as Surgical Ward Officer.

Captain Karl H. Kellogg, P. O. Box 207, Pomona, Calif., as Medical Ward Officer.

Captain Richard A. Roach, 248 Sixteenth Street, Santa Monica, Calif., as Medical Ward Officer.

First Lieutenant Shuler F. Fagan, 1100 Mission Road, Los Angeles, Calif., as Medical Ward Officer.

First Lieutenant Harold E. Morrison, 1706 West Fifty-third Street, Los Angeles, Calif., as Medical Ward Officer.

First Lieutenant Harold H. Manlon, 1203 Haas Building, Los Angeles, Calif., as Surgical Ward Officer.

Captain Arthur E. Gill, Soldiers Home, Los Angeles, Calif., as Surgical Ward Officer.

**To Station Hospital No. 136, Communications Zone:**

Captain Charles C. R. Pugmire, 302 Felt Building, Salt Lake City, Utah, as Medical Ward Officer.

**To Station Hospital No. 139, Communications Zone:**

Major Harry J. Willey, P. O. Box 181, Porterville, Calif., as Chief of Surgical Service.

First Lieutenant David R. Robbins, 1244 Third Avenue, Los Angeles, Calif., as Laboratory Officer.

**To Station Hospital No. 142, Communications Zone:**

Lieutenant-Colonel Charles E. Mordoff, Alameda County Hospital, San Leandro, Calif., as Commanding Officer.

Major Robert T. Legge, 3016 Benvenue Avenue, Berkeley, Calif., as Chief of Medical Service.

Captain Herbert A. Makinson, 201 Ridgeway Avenue, Oakland, Calif., as Medical Ward Officer.

First Lieutenant Harry Abrons, West Berkeley Bank Building, Berkeley, Calif., as Surgical Ward Officer.

**To Station Hospital No. 145, Communications Zone:**

Lieutenant-Colonel Fred D. Fairchild, 1055 East Vernon Avenue, Los Angeles, Calif., as Commanding Officer.

Major John V. Greene, 3604 Granada Avenue, San Diego, Calif., as Chief of Medical Service.

**To Station Hospital No. 147, Communications Zone:**

Major William F. Beer, 181 B Street, Salt Lake City, Utah, as Chief of Surgical Service.

**To Station Hospital No. 149, Communications Zone:**

Lieutenant-Colonel Justus M. Wheate, 495 Ulloa Street, San Francisco, Calif., as Commanding Officer.

Captain Clain F. Gelston, 384 Post Street, San Francisco, Calif., as Medical Ward Officer.

Captain Charles H. Hecker, Eldridge, Calif., as Surgical Ward Officer.

First Lieutenant Roy F. Nelson, 2401 Sacramento Street, San Francisco, Calif., as Surgical Ward Officer.

First Lieutenant Gerald B. O'Connor, 2740 Green Street, San Francisco, Calif. (Temp. Add., Southern Pacific Hospital, San Francisco, Calif.), as Medical Ward Officer.

**To Station Hospital No. 150, Communications Zone:**

Lieutenant-Colonel Raymond A. Akin, National Soldiers Home, Sawtelle, Calif., as Commanding Officer.

Major Harry W. Murray, 760 North El Molino Avenue, Pasadena, Calif., as Chief of Surgical Service.

Captain Wilbur W. MacKenzie, 921 Taft Building, Hollywood, Los Angeles, Calif., as Surgical Ward Officer.

**To Sixty-fifth Surgical Hospital, Third Army:**

First Lieutenant Hans F. Schluter, 617 California State Life Building, Sacramento, Calif., as Assistant Operating Surgeon.

**To Sixty-seventh Surgical Hospital, Third Army:**

Major Clarence A. Johnson, 507 North Larchmont Boulevard, Los Angeles, Calif., as Operating Surgeon.

First Lieutenant Raymond W. Huntsberger, 323 South Lafayette Park Place, Los Angeles, Calif., as Assistant Operating Surgeon.

**To Seventy-second Surgical Hospital, Sixth Army:**

Major Arthur M. Tweedie, 719 Hollingsworth Building, Los Angeles, Calif., as Chief of Surgical Service.

Captain Charles O. Hansen, Long Beach, Calif., as Assistant Chief of Medical Service.

**To Third Convalescent Hospital, Third Army:**

Lieutenant-Colonel Charles H. Halliday, 6019 Rock Ridge Boulevard, Oakland, Calif., as Executive Officer.

Major Conrad M. Meyer, P. O. Box 1290, San Francisco, Calif., as Chief of Surgical Service.

Major Harry Robertson, 522 Patterson Building, Fresno, Calif., as Chief of Medical Service.

Captain John P. Degnan, Groveland, Calif., as Surgical Ward Officer.

First Lieutenant Rodney F. Atsatt, 1515 Fifth Avenue, San Francisco, Calif., as Surgical Ward Officer.

First Lieutenant Morris A. Frank, 1091 McAllister Street, San Francisco, Calif., as Medical Ward Officer.

First Lieutenant Hans Hartman, Lane Hospital, San Francisco, Calif., as Surgical Ward Officer.

First Lieutenant Walter Lawrence, St. Luke's Hospital, San Francisco, Calif., as Medical Ward Officer.

First Lieutenant Victor C. McPhee, 3324 Twenty-first Street, San Francisco, Calif., as Medical Ward Officer.

**To Hospital Train No. 1, Communications Zone:**

Captain George H. Christy, Vernal, Utah, as Orthopedic Service.

Captain Joseph E. Day, 416 South Temple Street, Salt Lake City, Utah, as Medical Service.

First Lieutenant Charles S. Roller, St. Marks Hospital, Salt Lake City, Utah, as Surgical Service.

**To Hospital Train No. 44, Communications Zone:**

First Lieutenant Harry L. Jenkins, Humboldt National Bank Building, Eureka, Calif., as Orthopedic Service.

First Lieutenant Angus A. McKinnon, Mater Misericordiae Hospital, Sacramento, Calif., as Medical Service.

**To Hospital Train No. 55, Zone of the Interior:**

Captain James A. Garland, 100 Monterey Road, Los Angeles, Calif., as Medical Service.

First Lieutenant Oscar D. Johnson, 131 Pine Avenue, Long Beach, Calif., as Orthopedic Service.

**To Hospital Train No. 65, Zone of the Interior:**

Major Claude L. Armstrong, U. S. V. Hospital No. 77, Portland, Oregon, as Commanding Officer.

Captain Charles L. Williams, 409 E Street, McMinnville, Oregon, as Surgical Service.

**To Hospital Train No. 69, Zone of the Interior:**

Major Riden R. Hamilton, 687 Clackamas, Portland, Oregon, as Commanding Officer.

**To Hospital Train No. 72, Zone of the Interior:**

Major Abram M. Newton, Kane Building, Pocatello, Idaho, as Commanding Officer.

**To Hospital Center No. 22, Communications Zone:**

Major Parker G. Borden, U. S. V. Hospital No. 24, Palo Alto, Calif., as Neuro-psychiatrist.

Major Adam H. Konigsmacher, 710 Patterson Building, Fresno, Calif., as Urologist and Dermatologist.

Major Samuel B. McFarland, U. S. V. Hospital No. 102, Livermore, Calif., as Roentgenologist.

First Lieutenant Davis R. Divanovich, 934 Flood Building, San Francisco, Calif., as Receiving and Sorting Officer.

Major Thomas H. T. Wight, U. S. V. Hospital No. 24, Palo Alto, Calif., as Laboratory Officer, Center Laboratory.

First Lieutenant William A. Pettit, 609 Seventh Avenue, Salt Lake City, Utah, as Sanitation Officer, Headquarters and Service Company.

Major Arthur H. Reinstein, Flood Building, San Francisco, Calif., as Chief of Surgical Service, Convalescent Camp.

Captain Charles A. Broadbudd, 811 Commercial and Savings Bank Building, Stockton, Calif., as Surgical Ward Officer, Convalescent Camp.

**To Medical Laboratory No. 1 (Aviation), Communications Zone:**

First Lieutenant Horace G. Miller, care Sacramento Hospital, Sacramento, Calif., as Laboratory Clinician.

**To Medical Laboratory No. 2 (Aviation), Communications Zone:**

Captain Hiram B. Duncan, 969-975 Flood Building, San Francisco, Calif., as Laboratory Clinician.

**To Medical Laboratory No. 5 (Aviation), Communications Zone:**

First Lieutenant Ralph A. Reynolds, Southern Pacific Hospital, San Francisco, Calif., as Laboratory Clinician.

**To Eighteenth Medical Supply Depot, Communications Zone:**

Lieutenant-Colonel Samuel C. Buck, 1535 Beverly Place, Berkeley, Calif., as Commanding Officer.

Major Theodore G. Howe, 1810 Catalina Avenue, Berkeley, Calif., as Medical Material Officer.

Major Sidney E. D. Pinniger, U. S. Veterans Bureau, San Francisco, Calif., as Executive Officer.

The following-named reserve officers are assigned as indicated:

Major Claude H. Church, Med. Res., Yosemite National Park Hospital, Yosemite National Park, Calif., is relieved from assignment to General Hospital No. 142 (La Garde), Zone of the Interior, and is assigned to the Eighty-eighth Evacuation Hospital, Sixth Army, as Assistant to Chief of Surgical Service.

Major John Young Bartholomew, Med. Res., 602 Funston Avenue, San Francisco, Calif., is assigned to the 627th Coast Artillery (Hr. Def.) as Regimental Surgeon, and will report by letter to the Executive Officer, Coast Artillery Reserves, Northern California, Presidio of San Francisco, Calif., for instructions.

Lieutenant-Colonel Lionel D. Prince, Med. Res., 490 Post Street, San Francisco, Calif., to Hospital Center No. 22, Communications, as Orthopedist.

Captain Clarence E. Rees, Med. Res., 415 Elm Street, San Diego, Calif., to Ninetieth Evacuation Hospital, Sixth Army, as Surgical Ward Officer.

Captain George M. Selby, Med. Res., 3801 California Street, San Diego, Calif., to Ninetieth Evacuation Hospital, Sixth Army, as Evacuation Officer.

First Lieutenant Maurice L. Tainter, Med. Res., Stanford University Medical School, San Francisco, Calif., to General Hospital No. 30, Communications Zone, as Medical Ward Officer.

Lieutenant-Colonel Neal N. Wood, Med. Res., 1100 Mission Road, Los Angeles, Calif., is attached to Ninth Corps Medical Service Headquarters, Ninth Corps Troops, as Principal Assistant Hospitalization and Inspection.

Lieutenant-Colonel Isaac H. Jones, Med. Res., 1920 Wilshire Boulevard, Los Angeles, Calif., attached to Eighty-first Evacuation Hospital, Third Army, as Chief of Surgical Service.

Lieutenant-Colonel Frank H. Paterson, Med. Res., 209 Walter L. Moore Building, Santa Ana, Calif., to Hospital Center No. 24, Zone of the Interior, as Commanding Officer.

Major Maurice M. Armstrong, Med. Res., 427 Los Angeles Railway Building, Los Angeles, Calif., to Station Hospital No. 145, Communications Zone, as Chief of Surgical Service.

Captain Malcolm Duncan Winter, Med. Res., 707 South Center Street, Miles City, Mont., is relieved from assignment to the 104th Division, and is assigned to General Hospital No. 145, Zone of the Interior, as Assistant to Chief of Medical Service.

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*Subject this month: The Practicability of Radiological Visibility of the Gall-Bladder: Its Availability, Indications and Values to the Family Doctor.*

*Discussed by: W. W. Boardman, Walter C. Alvarez, H. J. Ullmann, Howard E. Ruggles.*

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Volume XXIV

MAY • 1926

Number 5





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### Bibliography:

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|---|--|
| [1] Chapin, J. W., Calif. & Western Med. Dec. 1925. Vol. XXIII. No. 25. | [3] Marriott, W. McK. and Davidson, L. T. J. A. M. A. 1923. Vol. 81, pg. 2007. |
| [2] Weeks, V. J., Archives of Pediatrics, Nov. 1925. Vol. XLII. No. 11. | [4] Gleich, M., Archives of Pediatrics, 1924. Vol. 41, Page 548.               |

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# CALIFORNIA AND WESTERN MEDICINE

VOLUME XXIV

MAY, 1926

No. 5

## ON MAKING THE WORLD BETTER\*

By EDWARD N. EWER

IT IS indeed an honor to welcome the California Medical Association with its 4000 members and their families and friends to this East Bay District.

The Alameda County Medical Association feels keenly its responsibilities as your host, and I, elected to preside at this meeting among friends of my own county, am honored beyond my deserts. We all feel sure that the scientific papers and discussions provided by your section officers and program committee will be of great interest, and our local arrangement committee will be disappointed if, in any particular, its plans for your entertainment miscarry.

Year by year these meetings are assuming greater importance in cementing professional friendships and unity of medical thought. The attendance continually improves, interest sharpens, the essays and discussions are better, and by these tokens we may feel assured that the value of close organization is recognized as the best means of safeguarding the public health and our professional interests.

Meeting needs seem to be expanding, for new societies are appearing in the field with increasing frequency, and the organization of hospital staffs is furnishing another outlet for the get-together spirit. It is to be hoped this will not detract from the interest in our regular associations—county, state, and national—for it is in their transactions that our influence will be built up and matters of policy threshed out. Aside from uplift force within the ranks, it is as certain as anything can be that the ad-

vancement of medicine, and its usefulness in the general scheme of community and political life, are improved and made wholesome by thorough organization. It holds its members under the discipline of a code of ethics not excelled by that of any other

group. Those who transgress that code are guilty of disloyalty, and they degrade medicine in the eyes of the people. Those who ridicule our ethics are the cynics of the Bernard Shaw type, who habitually sneer at disinterestedness and moral worth. Shaw, for instance, called medical ethics "a conspiracy against the public." The public little knows what it suffers at the hands of cults and medical frauds outside our code.

Organized medicine has committees and bureaus for investigation planned to separate the good from the bad. The American Medical Association has developed these activities far beyond any other medical organization in the world. Those physicians who take a few moments each week to look over the A. M. A. Journal account of the work of the chemical laboratory,

where original investigations are made and nostrums analyzed, and who pay attention to the painstaking examinations of the Council on Pharmacy and Chemistry, find they are tapping veritable mines of useful information.

For several years I received regularly most of the state medical journals published by our sister societies throughout the country. I read as much of their material as I could, and always with increasing respect for CALIFORNIA AND WESTERN MEDICINE. Let me hasten to say this was not due to inferiority in the others, but because I found our own Journal



EDWARD N. EWER

\* Address of the President of the California Medical Association, Oakland, April 28, 1926.



so extensively quoted that I knew its up-to-datedness and literary merit were being appreciated in circles where quality counts. Your Council is proud of its Journal and of its devoted Editor, to whom most credit for its goodness is due. The association structure is democratic in the truest meaning of the term. Its component parts, the state societies, send elected delegates to form its governing body, and the state societies in turn are governed by delegates from the county units. This form of government is representative of the best in the membership, and no form of organization could be more worthy of loyalty and support. Complete unity of thought cannot be expected, but subversive individualism must succumb to the decisions of an elected central authority if we hope to present a sturdy front when menaced from without. If it is thought there is no menace, that the cry of wolf is heard when there is no wolf, one has but to turn to England for the answer. We need a rallying cry which will bring our hosts into fighting position when attacked.

Our forefathers in medicine bequeathed us a respectable, even commanding, position in society, which we are upholding so far as scientific attainment and progress are concerned. Let us then stand together and pass it on to our successors, not only unimpaired but improved.

There is a growing feeling in medical organization circles that medicine as a profession is in danger of being swallowed up by the great American service movement which James M. Cain describes as a disease, "an itch to make the world better." There are several thousand of these associations in existence. A surprising number of them have for all or part of their programs the almost forcible bestowal of some form of medical service upon a people who would value it more if they were taught to seek it and pay for it.

There has always been enthusiastic endorsement by physicians of all efficient disease preventive measures, as well as endorsement of necessary medical charity. In fact, voluntary free service constitutes one-third of the entire practice of physicians. When, on the other hand, a government prescribes by law such an atrocity as the panel system in England, and insurance companies plan to practice medicine wholesale in the supposed interest of their policyholders, we begin to see the results of the kind of education in helplessness which many of these servist societies are purveying. It seems worth while to inquire how far organized medicine can afford to go in the approval of agencies whose work paves the way to state medicine.

In a sudden burst of energy a few years ago we prevented compulsory health insurance being foisted upon us, but the underground rumblings are still heard and eternal vigilance is necessary to prevent the recrudescence of that or something similar. The purpose, however mistaken, of this prodigiously widespread service movement is laudable. It is to improve the social conditions under which we live, hence attacks upon any part of it are unpopular. We should be able to inject enough virility into our organizations to halt all unwise encroachments

in the field of medicine which impair its influence and render it unattractive as a life work for men of good minds. If such avoid it, its present remarkable progress must slow down.

One of the presidents of the British Medical Association said that they got the panel system because of lack of good organization. Later, when attempts were made to still further cripple efficiency by reducing the ridiculously low panel fees, they had developed enough organization unity not only to defeat the reduction, but to actually force an increase.

There is no doubt we have a surfeit of social service. The expense of it in all its phases is vastly out of proportion to the benefits derived. Business houses and particularly retail merchants were called upon to supply the bulk of the funds until a few years ago, when the ever-increasing contributions became unbearable. Then some brain fertile with business sense found a wonderful way to reduce the pressure. The community chest movement went like wildfire, and with good reason, for it provided relief for the merchants by wider distribution of the burden. The clamor for community chest help continually goads the chest workers on to more strenuous efforts to increase their funds. These shock troops will soon meet an economic line of resistance. Then it will be necessary, and it will be found possible, to retrench in the luxuries of service without crippling the worthy charities. There is a heart side to the question, and the needy and oppressed must be cared for.

Some of the forms of service which contact with medicine are not tapping the community chests as yet, neither do they threaten the integrity of medicine as a profession. They do not, however, add to its dignity, and they have other pernicious features which need watching. One of them is the eugenic movement. It has bad possibilities as well as good. Something may come out of it in the future, but the past mistakes of the eugenists warn us to follow them very slowly and circumspectly. They blame everything wrong to heredity. While they grant some slight influence to environment, they treat it as an almost negligible factor.

It must be remembered that Mendel's experiments with the garden peas, the foundation of heredity studies, were announced in 1865, then forgotten till the beginning of the present century. So we are only in the infancy of eugenics. Much more experience and study are necessary before enough of the eugenic theories will blend into the realm of fact to be ready for use. About the only important thing so far proven is, that with a certain mathematical regularity, feeble-minded parents beget feeble-minded children. The difficulty here lies in the establishment of the degree of feeble-mindedness which warrants banishment to that land called "moronia" where people must not procreate.

Intelligence tests are not infallible as yet. We were told a few years ago that 50 to 90 per cent of those confined in our prisons were feeble-minded. Now comes Dr. Curti of Smith College and points out that these early adult tests were not constructed with the care given those for children, and are not nearly so reliable.

The failure of the Lombroso theory which sought

to distinguish a criminal class by definite physical stigmata, and which led to the sweeping changes since made in the treatment of criminals, has been followed by a "tendency among advanced thinkers today to make responsibility a matter chiefly of intelligence."

Goddard said in 1915 that careful studies indicate 50 per cent of all criminals are feeble-minded; and to quote Professor Terman in 1916, "there is no investigator who denies the fearful role played by mental deficiency in the production of vice, crime, and delinquency." There are many chagrined psychologists who deny it now, and Dr. Curti says: "This whole modern attitude that half the delinquency in society is the result of inborn mental defect, is grounded upon error, one of the most regrettable in the history of the new biological science of psychology." "The social workers are sincere, the judges fair-minded, the average educated person intelligent, but they are all misinformed. Psychologists as well as many outside the field have been guilty of overhasty generalization, of an overzealous attempt to apply prematurely the findings of a science yet in its infancy, findings that should have been given to the public, if at all, as purely tentative."

The old Terman-Binet tests showed 93,000 men of the white draft to have an average mental age of thirteen years. "This would show," according to Dr. Curti, "that the average citizen of the United States, if the white draft is a representative group, is just above the upper line of border-line deficiency, often classified as feeble-mindedness." It is manifestly absurd to believe that any such percentage of our country's population classify as border-line deficiencies.

The Army Alpha tests applied by Murchison to over 3000 white criminals showed them to have the same average intelligence as the white draft. Furthermore, attention is being drawn to the fact that proven morons are not very likely to become criminals anyway.

There is much more in Dr. Curti's paper, which was printed in the February, 1926, *Scientific Monthly*, to make one believe that the intensive study of crime, which is getting under way in this country, will dispel the hereditary disease theory and relieve us of this whole sob-sister maudlinism of criminal coddling.

And so we see that science is not immune from error. But it always tries to correct it. It deals with facts which it seeks out and brings to the surface to prove their truth. Its mistakes are sometimes temporarily embarrassing. It made one of them when it introduced the monkey into the plan of evolution, as a sort of early pre-Volstead period man. The monkey has had to be deleted, but evolution stands. It stands even though it cannot produce a set of working models, ranging from a single cell moving in the ooze of the paleozoic seas, on through successive living things to homo-sapiens.

Those who wish to delve into the wild excesses of the present eugenic enthusiasm should read that book with the ingenious title, "The Fruit of the

Family Tree" by Albert Edward Wiggam. Another of his books widely read and quoted qualifies him as a breaker of images of the first water, frenzied and unafraid. Here are some of his chapter headings called warnings: 1. That the Advanced Races are Going Backward. 2. That Medicine, Hygiene, and Sanitation will Weaken the Human Race. 3. That Morals, Education, Art, and Religion will not Improve the Human Race.

That such near scientists can attract followers is passing strange. This earth does not lack areas where sanitation, medicine, and education have been neglected for countless ages, but they do not show the fit becoming fitter. If there is a survival of the fittest, they are only the best of the unfit of yesteryear.

As for religion, real scientists believe it does improve the human race and they do not deride it. Spiritual needs are real needs, scientific needs, and four-fifths of all people satisfy them through religion. "Religion," as Dr. Jordan says, "never dies, though religions change." The change is slow, while in science it is rapid. So rapid it seemed to intoxicate a class of self-appointed friends of science, whose poison pens brought on the flareup of 1925, the total result of which is four states made unsafe for science by laws hampering its teaching. As long as science confines its researches to the harnessing of nature's forces for industrial progress, it gets general applause. When it attempts the study of man, alleged to be the highest study of all, troubles arise because out of the haze of the distant past comes a story of his origin, embalmed for all time by the dictum that it is inspired. "This," says Dr. Fosdick, "appears to be the crux of the whole argument between religion and science." But it seems childish to find fault with that. All the great moral guidance lessons are best told in the Bible, and reason is not strained in believing them inspired. If the compilers of the Book found it necessary to include some folklore stories to press home those lessons in an age of superstition, fear, and ignorance, it was good psychology, and why not inspired? Also, there is abundant evidence we have not yet approached the passing of the age of superstition. What religion will be when that time comes, no one knows. In the meantime, following the Wiggams in their evaluation of religion, morals, education, art, and hygiene, and with them transferring our worship to the shrine of assortative mating, is to laugh.

The study of race heredity characteristics will proceed in more or less orderly course, but the material now available is but half-baked and indigestible.

Cain's article on service, to which I have already referred, was published last fall in an eastern magazine, and the title was the *Pathology of Service*. He considers it all pathology and, furthermore, a pathology peculiarly American. He condemns it wholeheartedly and unreservedly as, "fine schemes, having no objective validity at all, . . . whirling clouds . . . in a national fever dream," and much more in the same sarcastic vein. He says that it is unknown in the Orient, in France, Germany, Italy, Russia, Spain, and most of the civilized world. Most people consider it one of the glorious achieve-



ments in American social life, and so it was until it became diseased from overfeeding. It is the pathology *in service* we ought to eradicate. Cain thinks it needs the surgery of ridicule. He thinks he has isolated the bacillus of service, and he finds it to be the dramatics of the thing. He notes that those who find nothing dull in their lives do not become servists, and he mentions as belonging to that class, cowboys, actors, bootleggers, opera singers, head waiters, baseball players, writers, newspapermen, and doctors. They all have something in their lives stimulating to self-admiration, and do not need the meetings, parades, and demonstrations with the badges, banners, and slogans attending the activities of the servists.

But to get back to the pathology. This bacillus plays strange pranks with its culture media, that is to say, the human brain, and when the right stage of softening occurs queer colonies appear. One of them is called birth control. It is characterized by an irresistible urge to tamper with the biology of population growth. Nothing is too foolish to attract followers, often in high places.

The extravagant claims made for birth control by its votaries stamp it as the most pretentious as well as the most bizarre of the servist cults. It was discovered for America in 1914 by Mrs. Margaret Sanger, then a trained nurse in New York. Her emotions and sympathies were aroused by contact with many poor families with many children, struggling with the problems of existence. She won sympathy for her cause through the assumption that it works in the direction of social and economic improvement of the poor.

It has been asked, "Do large families among the poverty stricken, however deplorable, justify a nation-wide program of broadcasting contraceptive information without reserve?" We must inquire if the information they wish to disseminate is likely to filter through to the classes they most desire to benefit, or will it supply another push downward to the already greatly reduced families of the well-to-do.

Grading the population from the very poor to the very rich, with the average of three children to the family somewhere in the middle register, the number is supposed to go up as the means for support go down. The ideal would be struck if the situation were reversed. There is nothing I can see in the birth control program which offers any prospect of accomplishing this. Neither do propagandists manifest any concern over this phase of it.

If the widespread establishment of clinics for teaching the use of contraceptive methods is brought about, and the families in the lower brackets, so to speak, are influenced to produce fewer children, it may dangerously reduce the average. Rather, we might concentrate upon other charitable measures for the improvement of facilities for the proper care of poor women at childbirth and afterward in the rearing of their babies.

Many eugenists and biologists seem to have been beguiled into a half-hearted endorsement of birth control. This was accomplished by a compromise made to them at the Birth Control Congress held

in New York in November, 1921. At their insistence a resolution was passed stating that the purpose of the Birth Control League was "To encourage good sound families among our abler and more successful stocks." Of all things, this is just what it has not done. Some biologists admit this, but they have hopes for it in the future. But in Amsterdam, where they claim birth restriction has reached the highest degree of efficiency, the poor alone are not singled out for its attentions. Every mother, regardless of her stock or class in society, receives after delivery a circular about birth control.

The emotional reaction, which brought the movement into existence, attaches our sympathy; its ultimate reaches, however, seem not to bear the light of analysis.

Even among the very poor, children are not entirely a liability. It is, in spite of the eugenists, at least debatable whether any great majority of our most useful citizens are recruited from the opulent class. Certain it is that many brilliantly useful do come up from below.

While, then, sympathy for the downtrodden and burdened was the original incentive for the movement, that is being shoved more upstage at present. It is being hailed as a world measure for the relief of all ills both large and petty which beset states and nations.

One of their most enthusiastic supporters, Knopf, lays blame to our supposed unlimited fecundity for the fact that one-third of the millions of men examined in preparation for our entrance in the war, were found unfit for service. Another blames the whole war to the same thing. He says the fearful catastrophe was started by a nation in which unlimited procreation among rich and poor, the educated and the uneducated, the well and the sick, was not only encouraged but officially rewarded. But that is nothing. That is only one war. Here we have them all included in this flowery effusion from the pen of Mrs. Sanger: "No despot ever flung forth his legions to die in foreign conquest, no privilege-ruled nation ever erupted across its borders to lock in death embrace with another, but behind them loomed the driving power of a population too large for its boundaries and its natural resources."

Mrs. Sanger further proclaims that "the most vital problem in life in the United States today is reckless child-bearing." If we grant that there are instances of recklessness, the validity of the argument still depends upon how widespread it is, and therefore its importance as a world economic problem.

This brings up the inquiry as to how birth rates have been behaving in this and other countries in late years. The rate has declined over 30 per cent in the United States in the last thirty years, and it is still declining. The rapid population growth in recent years has been due to immigration and the relatively high fertility of these newcomers. The World Almanac for 1918 shows that foreign-born mothers in six eastern states gave birth to 51 per cent of the children. A large proportion of these people have come during their reproductive ages when the death rate is also at its lowest.

Restricted immigration should change all this. Our population has little more than maintained itself of late if we leave out the Southern States and some rural communities. The increase in population in the United States has not been attended with an increase in squalor, poverty, and unhappiness as we are led to expect. Neither was that the case in Germany, so often quoted for its horrific birth propensities before the war.

Birth controllers make great capital of the fact that Holland has practiced it for forty years. It is the banner birth regulation country of the world and is supposed to have reaped its benefits to the full. The average birth rate in the three principal cities in Holland was 37.7 per thousand in 1881, when the control movement was started. In 1912 it had fallen to 25.3 per 1000. But this is not so remarkable when we learn that the American birth rate during the same period went down in the same way, only it went lower, viz.: to 23 per 1000. It did this without the assistance of these clinics or other birth control ballyhoo. In England and Wales the rate fell from 33.5 to 23.8; in Germany from 37 to 28; in Norway from 31 to 25; in Sweden 29 to 23; and in Belgium 30.9 to 23. These declines have come in the natural course of events and are quite comparable with what happened in Holland.

Another thing they ascribe to these measures is that the general death rate dropped in the same period from 24 to 11 per 1000. But the death rate in America, Norway, Sweden, Germany, and most other civilized countries behaved in the same way.

They cast aside all modesty and reserve, however, when they claim that birth control has increased the stature of the Dutch people an average of four inches. Interesting if true. In this they are stealing the thunder of the eugenists. But this thing is not eugenics and has nothing to do with improving physical or mental characteristics by mating experiments.

They hold out birth restriction as the remedy for crime, ignorance, poverty, underfeeding, bad housing, tuberculosis, degeneracy, alcoholism, and mental defectiveness. The eugenists would *breed* them all away. Some of these things have decreased during the time our birth rate has been falling 30 per cent, and some of them have not. Crime in every form has greatly increased, in spite of our falling birth rate.

The homicide rate of the United States is twenty-four times the rate in Holland, and thirty-six times as great as in Switzerland. Switzerland then has a slightly better crime record than Holland without any particular attention from birth control organizations; and America with slight attention so far, but a greater natural birth decline than Holland, is so much worse in crime that it would be silly to connect the two as cause and effect.

If there is any kind of service organization this country needs, it is one to combat the "rising tide of crime." Compared with that job the cleansing of the Augean stables would be a holiday pastime.

According to our statisticians it is necessary for each nonsterile family to have a little better than

three children to replace the original quota from which the parents sprang. Many groups of American families have been recently studied, and they have all shown fewer than this minimum. Professors Baber and Ross found in the Middle West "a shrinkage in family size from 5.4 to 3.3 children in the course of one generation."

The Neo-Malthusians claim that most of those suffering with tuberculosis range in number from the fifth up in their respective families; that the third and fourth children seldom become victims of tuberculosis, and the first and second almost never. Recent questioning of 300 tuberculosis patients showed that 75 per cent numbered fourth or under, and 25 per cent were fifth or over in their respective families; so this appears to refute the claim of the controllers. Could their contention that the first two children are almost never afflicted be substantiated, the anti-tuberculosis workers, whose efforts are supposed to have cut the tuberculosis death rate in two, might have to surrender their laurels. Even so they would not give them up to the controllers but to natural causes, for, as has been shown, there was occurring coincidentally with the decrease in tuberculosis a great reduction in the average size of families, and this quite independently of any clinical instructions in birth restriction.

My principal argument has been against birth control as a general national cure-all. I am opposed to the organization of birth control organizations, popular propaganda by lectures, and the establishment of these race-suicide service stations in "all populous centers." It is an expensive and superfluous kind of social service, almost nasty in character, and tending against community uplift and refinement. I am sure if there are any birth control necessities, they may safely be left quietly in the hands of the regular medical profession in its private offices, where they will never be unduly featured.

In conclusion, it seems to me that organized medicine should keep a sharp eye on the excesses of the servists in the interests of orderly progress, and that wisdom demands due recognition of the scientific needs of a humanity which derives its spiritual satisfaction from religion. Going along with religion in a helpful way will be far better than ridicule in keeping the fanatics from further crippling our school system.

After all, reconciliation of religion to scientific effort and progress approaches the ideal in agencies for making the world better.

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The science and art of public health nursing have not been definitely established. The duties of the public health nurse are still vague and varied. There is a tendency to adopt the plan of generalized district nursing. The ratio of one nurse to each 2000 or 3000 population is usually recommended. On this basis, the majority of cities today are inadequately equipped. Many of the problems concerned with public health nursing require careful scientific study, demonstration of principles and definition of service rendered. The relation of municipal to private nursing agencies is an important one. There should be no division of responsibility, and the general supervision of all services to the community should be centralized under the general direction of the local health officer to guarantee a well-balanced program.—Hugh S. Cumming.



## LOOKING BACKWARD WITH SATISFACTION AND FORWARD WITHOUT APPREHENSION\*

By WILLIAM TAYLOR McARTHUR, M. D.

IT IS now more than two thousand years since Hippocrates began blazing a trail through a world steeped in superstition and ignorance—a trail for the physician to follow, so definitely marked that no one need mistake the direction. The main purpose of the trail is the advancement of civilization, the making of life sweeter and safer for man by removing or counteracting the dangers to life, either from within his own body or from his environment.

Ruskin lighted Seven Lamps of Architecture to guide the architect in the pursuit of his art. There are many lamps along the trail of medical progress which will furnish inspiration and resolve to proceed further in search of the hidden truth in nature. Cast your eye backward to the Classic Period—the golden age of Greece—and there at the beginning of our journey you will see a lamp erected by Hippocrates in the presence of Socrates and Plato, Sophocles and Herodotus, Aristophanes and Pericles. It is a great beacon light whose kindly and beneficent rays make clear the high ideals of our profession and the ethical relation of the physician to his brother physician, and of the physician to his patient. They are our first rays of scientific medicine, throwing light on cause and effect, and demonstrate the importance of the mind and senses in the role of diagnosis. They impress upon us the value and necessity of a clean, honest, and upright life, and of a humanity so altruistic and far-reaching in its help to the suffering, that it stops at "neither East nor West, Border, nor Breed, nor Birth," and willingly faces Danger or Death, though it be at the ends of the earth. They furnish the physician the highest moral inspiration he possesses.

From the middle of the second century to the middle of the sixteenth, medicine groped along through the Dark Ages with little light except that furnished by the Galen candle. Its rays showed very little evidence of either science or art. Magicians, quacks, and charlatans of every kind infested

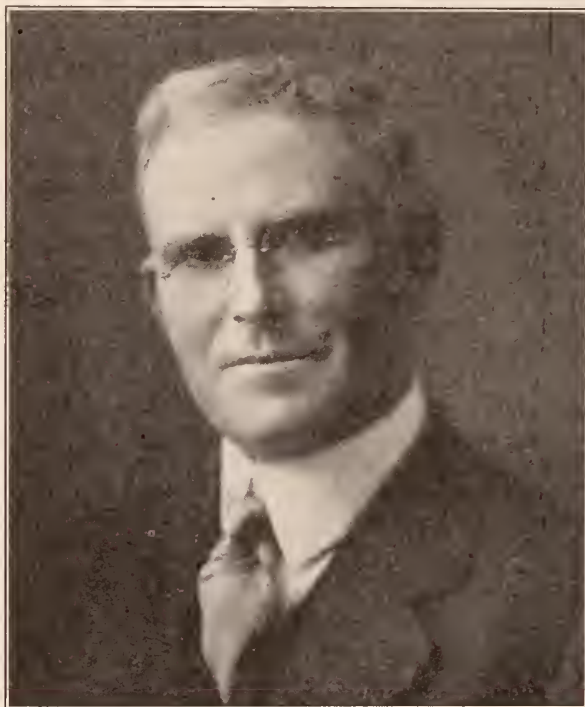
the country, and our trail is rather dark for fourteen centuries. But with the Renaissance a new light appeared on the horizon—the anatomical lamp of Vesalius—which enabled the physician to get a knowledge of the structure of the human body by observation and dissection, and fitted him to perform his own surgery instead of relying on barbers and blacksmiths. Quite near

on a high mountain-top, along the trail, stands the lamp of Physiology, set up by William Harvey about the middle of the seventeenth century. While the anatomical lamp shows the structure, the physiological lamp reveals the function of these structures, and the various processes taking place in the life of man from the cradle to the grave. It is a remarkably illuminating light, getting brighter and more penetrating as the years go by. Further along the trail, we are busy admiring the Immunity lamp of Jenner, when, gazing one century in advance, we behold on a high mountain-top of achievement the most glorious light of all, the Pasteur lamp of

Bacteriology. Its rays, like those from the rising sun over the surface of a lake, point onward—ever broadening and far-reaching. The trail is now an illuminated highway—illuminated by the lamps of Robert Koch and Lister, Ronald Ross and Gorgas, Walter Reed and Klebs, Osler and hundreds of others—in fact, more lamps in the last fifty years of the trail than in two thousand years before. "And the men bulk big on the old trail, our own trail, the out trail. They're God's own guides on the long trail, the trail that is always new." Surely, we can look backward with satisfaction.

The time is well spent in reflecting on departed greatness. "Great men are like great mountains; they lift our thoughts above the ordinary levels of humanity and act as an inspiration to us." "He who will not look backward to his ancestors will not look forward to posterity," is a maxim enunciated by Burke and sanctioned by experience as applied to the practical concerns of life.

Our heritage is our most valuable asset. The tendency of today is for action, rather than reflection. This is more noticeable in the young man than



WILLIAM TAYLOR McARTHUR

\* Inaugural address as President California Medical Association, delivered at Oakland, April 28, 1926.

in the man of mature years. But with the years comes wisdom. "The years teach much which the days never knew." Reflection usually furnishes the inspiration for wise action. The recollection of burned fingers prevents a repetition of the injury. It is the experience of the past that governs our present action. The future we never reach, the present is fleeting and soon becomes the past, the past alone endures.

But we must not spend all our time in reflection. We must be up and doing. Movement is a law of life. Where we stand today in medicine is not so important as the direction in which we are moving. However, with such a noble heritage and lofty ideals for inspiration, and such wealth of experience to guide us, we will go forward lighting other lamps, pushing the trail further through the valleys and lighting the mountain-peaks, so that we may see how to eradicate cancer, tuberculosis, pneumonia, infantile paralysis, and many other diseases.

Mark Sullivan of New York, political prophet, editorial observer, and veteran newspaperman, speaking the other day before the Friday Morning Club in Los Angeles on the "Magnificent Achievements of the Past Quarter Century," gave first place to the work accomplished through medical science. To quote from the evening papers, he said: "The warfare against disease, as respecting the individual, is more outstanding than any affairs of the politicians. The lengthening of the span of human life, due to the inventions and applications of medical science, is the greatest achievement of the last quarter of a century." I am told that this statement brought forth hearty applause from part of the audience, while others wondered why the program committee permitted one holding such material views the privileges of the platform. Evidently the dissenting group became busy in the afternoon, for some of the next morning papers, while devoting much space to his address, never mentioned what Mr. Sullivan considered entitled to first honors.

While we feel indebted to Mr. Sullivan for complimenting us so highly on our work of the last twenty-five years, we will venture the prophecy that we will not only keep first place, but that no other agency or force having to do with the advancement of civilization, will, in the next quarter of a century, be considered even a close competitor with medical science.

In the last fifty-five years the span of life has been increased fifteen years. Much of this has been due to the knowledge acquired in diseases of children, and treatment by modern methods, as well as preventive medicine in general. The good work done by the Tuberculosis Association deserves much credit. But we are just beginning to warm up. We possess the knowledge now to increase the span of life another fifteen years and are prepared to do it, if we but get the full co-operation of the public. But such co-operation will come only gradually. Light travels fast until it reaches the human mind. Education has ever lagged far behind knowledge.

It will be 230 years on the 14th of May since Edward Jenner discovered vaccine against smallpox. Its efficacy is not disputed by any physician of recognized scientific standing in the whole world today.

There is no excuse for the prevalence of smallpox in any civilized community in this age. Yet, in one of our California cities in February, sixty-three lives were sacrificed to the moloch of ignorance. Out of this number not one had been vaccinated in the last eighteen years. The rays of light from the Jenner lamp have failed to penetrate many darkened minds and as a consequence the United States leads the world in smallpox; and among the states, California, the acknowledged leader in so many things, takes first place in this loathsome disease—a fact that is being widely published as a detriment to our material welfare and a reflection upon the intelligence of our citizens.

The death rate from tuberculosis has been cut in two in the past twenty years through the public taking heed of the advice given by the medical profession. We have the knowledge to banish typhoid fever, and it was practically eliminated from the army camps in the great war. Earlier than this, when twenty thousand of our soldiers went to the border, vaccinated against typhoid, only two contracted the disease, yet the number of cases and the deaths from this trouble prove that advantage is not taken of our information. In 1924, in a single locality in California there were 632 typhoid cases. In the same year there were 11,110 cases of diphtheria with 695 deaths. Toxin anti-toxin treatment would have prevented every one of these. New York State cut its diphtheria death rate in half in the past ten years by a campaign of immunization with toxin anti-toxin. California can do the same. The death rate from scarlet fever, tetanus, cerebrospinal meningitis, and many other diseases can be decreased 50 per cent by heeding proper advice.

The outlook for the control of disease in California, with all its sunshine, is not promising, owing to the very low standard of education required of those permitted to treat the sick. Hundreds using the term doctor (not M. D.) are unable to diagnose the very commonest affections—in fact, they claim that diagnosis is not necessary. Reports to the Board of Health are belated; the good results of quarantine are lost; and the contagion has often spread far and wide before it is recognized.

According to the American Society for the Control of Cancer, 100,000 people in the United States will die of cancer in the present year; one woman out of every eight and one man out of every thirteen over 40 years of age will succumb to the disease. It is estimated—and conservatively, I think—that this death rate could be lowered 35 per cent in the next fifteen years, if people took advantage of the knowledge we now possess. How can this be done? Simply by having a thorough physical examination by the family physician once a year; detecting the trouble in its incipency, when eradication is possible.

Cardio-vascular and renal diseases, after the fourth decade, go on undiminished in their yearly death toll. If these conditions were detected early, the span of life could be greatly advanced. We have the information, but fail to get it to those in need with sufficient impressiveness. Thorough yearly examinations by the family physician will furnish the opportunity to give the needed advice. Too many



people endeavor to increase their length of days by treating themselves, taking all sorts of nostrums or following food faddists.

Our slogan should be a thorough yearly examination—an inventory of your health on your birthday. The field of preventive medicine should be more definitely a part of our workshop. Urge people to seek advice when well, and demonstrate that an ounce of prevention is worth a pound of cure; that anticipating trouble in time to avoid loss is cheaper and better and a greater life-saver than the old way of waiting until a disease has fastened its tentacles about you before seeking aid.

In this work the medical profession must do its part. The physician should be equipped to make the examinations thorough and reliable; for the people must be protected against incompetency. He must keep informed of the latest in medical discovery, with mind open and prepared to recognize truth, for, as Pasteur observes, "In the field of observation, chance favors only the mind that is prepared." One of the best ways to keep in touch and in step with medical progress is by attending and, when possible, taking an active part in the county society's work. Some physicians rarely attend except when they get into trouble and desire assistance. A Scotch minister said to his congregation: "The funeral services of Donald McGregor will be conducted in this church next Thursday at half-past two in the afternoon. I hope you will a' be here. I will be here and will preach a funeral sermon, and McGregor himself will be here, the first time in fourteen years."

The county unit can be of great assistance to the doctor by having part of the county society program consist of papers, demonstrations, and discussions on health-examination work. Every examination should have its findings recorded on a standard form.

But the duties of a county society are many, and they are not fulfilled when devoted exclusively to the education and good of its own members. It is largely responsible for the health of the community, and should be the central and directing force behind all health work in that section. It should call into its councils not only the representatives of boards of health of the state, county, and city, but dentists, nurses, and all agencies engaged in public health activities.

When we fully acknowledge our obligations to society and make an earnest endeavor to liquidate the debt, showing that our actions are in keeping with our lofty ideals, there will be no difficulty in getting full co-operation of the public.

The county society has obligations, too, outside of its own immediate neighborhood. Sister county societies covering large areas often need help. Have they good, properly equipped hospitals? If not, a study should be made and assistance given in establishing such. In these days of rapid transit one bacteriologist with a good technician could take care of the work in several such hospitals.

There is now a great cry for physicians for rural communities. I am not one who advocates the lowering of medical standards to supply such needs. The rural population is entitled to the best that scientific medicine can give just as much as the

urban. At the present time the physician, trained in scientific methods, finds himself greatly handicapped in his work in many rural communities owing to the lack of properly equipped hospitals. He feels that he is unable to make use of his knowledge; that he is likely to grow stale and rusty, if he remains in such environment; he wishes to make progress in his life-work and goes to a place where he can obtain the facilities to satisfy his desires.

Union hospitals can be established just as well as union high schools, and when such are assured and conducted upon right lines there will be little difficulty in supplying the demand for educated physicians in rural districts.

In assisting the sick man out of his troubles the physician should ever remember that the man has a mind, a personality, and a soul, as well as a body. By establishing his peace of mind, bolstering up his courage, and strengthening his faith in his present and further usefulness, a big advantage is gained in the treatment of any physical illness. We are not doing our full duty when we serve one at the expense of the other or attend to one and neglect the other. The cultists often get nearer to the real man by recognizing his complex nature than do many physicians.

Quite recently a prominent business man said to me: "I know that the majority of doctors have high and honest motives and are doing splendid, unselfish work for the control of disease and for the welfare of humanity, but there are many who, by their actions and words, inspire in a certain portion of the public a lack of confidence in the profession as a whole. I know of many instances where doctors have taken advantage of the patient's financial position and rendered bills for services so much out of proportion to the skill required and the time occupied that it seemed nothing other than a deliberate hold-up." Some physicians, like men in other callings, are worth more than others. Prices should be in proportion to the time given and the skill required and employed. In rendering bills the patient's financial condition should be considered and allowance made for all in need of such. This is usually done. In my opinion a doctor is entitled to his full fee where a patient is well able to pay, but he is not justified in demanding excessive amounts simply because his patient happens to be a millionaire.

The literature of today—especially the sensational novel type—and part of the modern stage tend to case reflections on the work and character of the physician and throw out in bold relief his sins of omission and commission. Fortunately, the vast majority of people do not get their impressions of the physician from the reading of sensational novels, which too often place the medical man on a low plane of civilization; nor do they attach much value to the cynical remarks of men like Bernard Shaw. Their estimation of the physician has been and still is high. It has been obtained by direct contact in the presence of sickness and suffering and death, and it will keep that elevated position just so long as physicians remain true to their ideals.

If you desire to hear the music of the Chicago Grand Opera Company on your radio, you must

keep "tuning in" until you get the Chicago wave length. And unless you get the proper adjustment, you will never hear anything except a lot of static—discordant notes that make life unpleasant. However, the man with patience and persistence and a desire for the best in life tries other adjustments and finally "tunes in." Suddenly, he seems transported to another world. Swelling strains of ennobling music pour forth, filling his heart and soul with gladness. What caused so great a change? Simply a slight adjustment.

The true physician looks upon his profession as an honor. He takes pride and joy in his work. He feels that he is contributing to the welfare and happiness of man, that he is helping to blaze and brighten a trail through a world of profound mysteries, making roads and building bridges through the swamps and morasses so that those who follow may pass safely over. His chief concern in life is to contribute to the betterment of the human race; to the relief of suffering, making life a bit sweeter and easier for others. He cheerfully joins with his colleagues in every line that tends to human progress. He is a pusher and lifter, not a leaner and trailer. He gives of his time and energy, and in the giving is the getter in a spiritual sense. He cherishes the ideals and traditions of his profession. To him such an heritage is a most valuable asset. The art and science in his work are never divorced, but go hand in hand, with the art ever uppermost. By kind words and deeds and sympathy and unselfishness he keeps ever in tune with humanity's wave length. He looks backward with satisfaction and forward without apprehension. And when the end draws near his pillow is made softer by the knowledge that he has the love of his patients, the respect and esteem of his colleagues, and that his work in this life has produced dividends, deposited from time to time deep down in the inner chamber of his soul, the only dividends of value—the only dividends that will be honored by Time or Eternity.

There is another type of physician, not a true physician, who is in the profession for what he can get out of it, his interest being purely selfish. The ideals and traditions of his forefathers never enter his mind; he has no use for the past; it is gone; and the future, he claims, has done nothing for him. He takes no interest in the humanitarian work of his confrères, unless as an objector. He rarely attends medical meetings or engages in any work toward the betterment of his profession. Such things bore him. He uses the term "doctor" as a commercial trademark or a cloak of social or scientific distinction. He attends to the call of suffering humanity at so much per, in dollars. He must be assured of his pay before he heeds the call. The medical profession to him is simply a commercial enterprise. He values his work wholly from a monetary standpoint, and fashions his bill, not from the ill or the pill or the skill or his time, but on the patient's ability to pay. He lives smug and independent, secure from the privations of want, yet dies, in time, from fatty degeneration of the soul.

And what is the difference between these two physicians? The one keeps ever in tune with humanity's

wave length; the other is constantly out of tune, and gets nothing but the jarring and screeching of static.

Humanity's wave length is the physician's wave length. Its ideals and its hopes, its aspirations and its prayers, are all one, and you can tune in quickly and easily by simply adopting the Golden Rule: "Do unto others as you would have them do unto you."

I look forward without apprehension, because I have complete confidence and faith that the great majority of men and women in our profession will keep in tune; will press onward and upward, lighting new lamps along "our own trail, the out trail." So long as there is life there will be sickness and suffering and need for the educated physician. May the heritage which we received from the men who "bulk big on the old trail" be cherished and enriched while in our possession, and passed on to those who come after us "unimpaired in dignity, honor, and usefulness!"

419 Pacific Mutual Building.

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## NOW FOR 1927

Just as we go to press, preliminary news reports come from the C. M. A. session in Oakland that:

Percy T. Phillips, Santa Cruz, was selected as president-elect.

Robert V. Day, Los Angeles, vice-president.

Other officers are:

William T. McArthur, Los Angeles, president.

Emma W. Pope, San Francisco, secretary.

The councilors are:

Lyell C. Kinney, San Diego, First District.

W. H. Kiger, Los Angeles, Second District.

William H. Bingaman, Salinas, Third District.

Fred R. DeLappe, Modesto, Fourth District.

John Hunt Shephard, San Jose, Fifth District.

W. B. Coffey, San Francisco, Sixth District.

Oliver D. Hamlin, Oakland, Seventh District.

James H. Parkinson, Sacramento, Eighth District.

H. S. Rogers, Petaluma, Ninth District.

Robert Peers, Colfax, At Large.

Joseph Catton, San Francisco, At Large.

George H. Kress, Los Angeles, At Large.

Harlan Shoemaker, Los Angeles, At Large.

Morton R. Gibbons, San Francisco, At Large.

C. L. Curtiss, Redlands, At Large.

The next session will be held at the Los Angeles Biltmore at a date to be fixed by the Council.



## EFFECTS OF INSULIN TREATMENT ON EXPERIMENTAL DIABETES OF DOGS

By E. F. F. COPP\*

(From the Scripps Metabolic Clinic)

*Doctor John R. Williams, Rochester, New York, believes that "Dr. Copp's work is timely and extremely important. It affords experimental proof for the clinical observation of a number of workers. It should be extended to throw light on the problem of the source and regeneration of the islets."*

*An editorial councilor, in endorsing this discourse for acceptance by California and Western Medicine, says: "It appears to me a worthy presentation of an interesting aspect of diabetes, well presented and, I believe, well sponsored, as coming from the new Scripps Metabolic Clinic."*

*Doctor F. G. Banting, University of Toronto, closes his discussion of Doctor Copp's studies by saying: "The fact that Dr. Copp has been able to show the complete disappearance of hydropic degeneration of the beta cells of the islets of Langerhans in partially depancreatized dogs by insulin treatment is of great importance, because it provides experimental evidence which supports the clinical findings that, in order that there be a gain in tolerance, the islets of Langerhans must be relieved of all strain."*

*Doctor Frederick M. Allen, Morristown, New Jersey, states in his discussion that "the ability to produce specific island changes at will by dietary overstrain, and to arrest these changes by relieving the overstrain, is so significant that these simple experiments should be tried by those pathologists who still doubt the island theory of diabetes. The occurrence of this same degenerative process in experimental animals, and in human patients likewise, ranks among the important proofs of the identity of experimental and clinical diabetes."*

*Doctor Lovell Langstroth, San Francisco, considers that "Dr. Copp brings us experimental proof of the importance of maintaining a normal blood sugar in diabetic dogs. This fits in exactly with the clinical facts, and there is every reason to suppose that his results are directly applicable to humans."—EDITOR.*

THE year 1889 probably marked the beginning of the study of experimental diabetes of animals. In that year, Mering and Minkowski<sup>1</sup> discovered, more or less by chance, that total pancreatectomy of dogs was followed by a severe and uncontrollable form of diabetes. This fact established a definite relationship between diabetes and the pancreas. Minkowski then tried, without success, to treat diabetes by feeding whole pancreas.

Until that time no great suspicion existed that the islands of the pancreas, described by and named after Langerhans in 1869, played any particular role in the metabolism of carbohydrates. Lewaschew<sup>2</sup> believed that the islands were simply modified acinar cells.

In 1884 Arnozan and Vaillard<sup>3</sup> noticed, after ligation of the pancreatic ducts in rabbits, that the acinar cells degenerated and were replaced by fibrous tissue. Schultze, in 1900, showed that after ligation of the ducts or in grafts of the gland the islands of Langerhans did not undergo destruction. Sscobolew,<sup>4</sup> in 1902, also noticed that there was atrophy

of the insular tissue after ligation of the pancreatic ducts.

In 1901 Weichselbaum and Stangl<sup>5</sup> first observed and clearly described the so-called hydropic degeneration of the islands of Langerhans in human cases of diabetes.

In 1901 Opie<sup>6</sup> claimed that there was a direct relationship between the pancreatic islands and human diabetes, and noticed hydropic degeneration of the Beta cells of the islands.

In 1908 Zuelzer<sup>7</sup> prepared an alcoholic extract of the pancreas of recently fed animals which, on intravenous injection, was capable of greatly diminishing, in several animals, the glycosuria following pancreatectomy. The pancreatic veins of those animals from which the extract was prepared were ligated for an hour before killing them, in order to attempt to accumulate the hormone in the gland. Forsbach<sup>8</sup> confirmed Zuelzer's finding on diabetic dogs, but as the extracts contained a large amount of protein he considered the results were due to a febrile reaction following the injection of the anti-diabetic hormone. So the use of their extract was abandoned.

MacCallum<sup>9</sup> ligated the ducts of the tail of the pancreas, and in a second operation several months later removed the rest of the pancreas and found that only a mild condition of diabetes followed. In a third operation, he removed the degenerated tail of the pancreas, and found that total diabetes resulted. This proved that the islands of Langerhans alone prevented the onset of diabetes, as the remnant removed was practically all islands. Unfortunately, an extract of this tissue was not made.

In 1913 Allen<sup>10</sup> first demonstrated experimentally on dogs that the production of diabetes was followed by typical pathological changes in the pancreas similar to those seen in the human. It was he who first noticed the hydropic degeneration of the Beta cells of the islands of Langerhans in dogs.

Knowlton and Starling<sup>11</sup> prepared extracts of the pancreas in weak acid solution, and found that a diabetic heart, when perfused outside the body, utilized less sugar than that of a normal heart similarly treated. Starling later believed that a mistake had been made somewhere, and abandoned further work along similar lines. Murlin<sup>12</sup> came very close to developing a potent pancreatic hormone, but made his extract alkaline instead of acid.

This long series of attempts to isolate the anti-diabetic hormone was followed by the announcement of Banting's<sup>13</sup> discovery in 1921. He conceived the idea of preparing insulin in November, 1920, while working as assistant in physiology at the Western University at London, Canada, as a result of reading an article by Baron<sup>14</sup> published in Surgery, Gynecology and Obstetrics. Banting and Best ligated the pancreatic ducts of dogs for ten weeks, and then from the remnant, largely composed of island tissue, prepared a potent extract by thinly slicing and pounding up this tissue in chilled Ringer's solution.

By May, 1922, Best had so refined the extract that the first clinic to use insulin was started in the Christie Street Military Hospital, Toronto. Before that time, subcutaneous injections of insulin often

\*E. F. F. Copp (La Jolla, California). M.B. from University of Toronto, 1923. Associated with Banting in early experiments with insulin; Christie Street Military Hospital, Toronto; with F. M. Allen one year. Practice limited to research and diseases of metabolism. Hospital connections: Scripps Metabolic Clinic. Appointments: Resident physician Scripps Metabolic Clinic. Publications: "Restoration of Hydropically Degenerated Cells of the Pancreatic Islands in Dogs Under Insulin Treatment" (Journal of Metabolic Research, Vol. 4, Nos. 3-4).

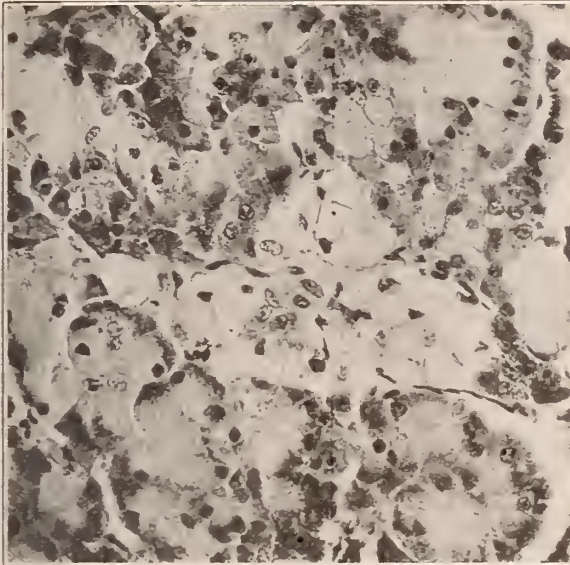


Figure 1

Dog. Advanced hydropic degeneration. Size of island evidently diminished by loss of cells. Contrast between vacuolated beta cells and surviving alpha cells under routine stain (eosin-methylene blue). The alpha cells appear in the center of the island.

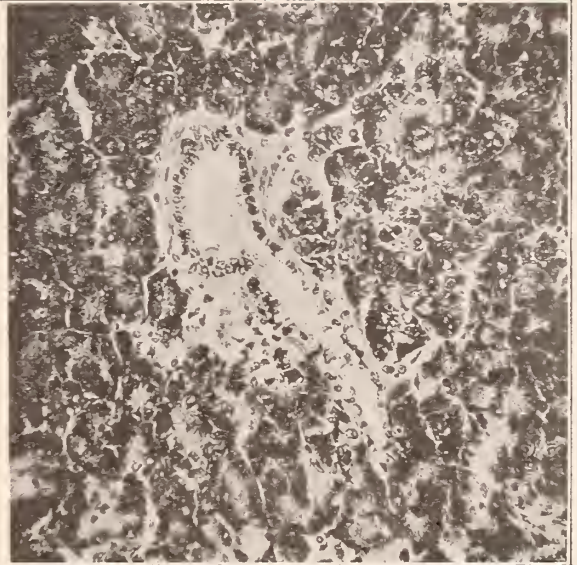


Figure 2

Dog. Advanced diabetes. A small duct opens into a large one. Some cells are vacuolated, others are not.

caused localized abscesses. Since that time very many papers have appeared regarding insulin treatment, and the general consensus of opinion at the present time is that insulin plus diet gives hope that even the severest case of diabetes may live comfortably and indefinitely.

The object of the present paper is to discover what changes are taking place in the pancreas, especially the islands, as a result of insulin treatment. Dogs, as a rule, were used in these experiments. The plan adopted was first to produce diabetes in dogs, as described by Allen.<sup>15</sup>

In this series of experiments some thirty animals were used, and dogs were found to be the best suited for this work. Cats, sheep, and goats did not stand the operations well, and it was almost impossible to produce diabetes in hogs, regardless of the amount of pancreatic tissue removed.

Each dog was submitted to several operations. At the first operation from eight-ninths to twelve-thirteenths of the total amount of pancreatic tissue was removed, and the small remnant of the gland was left around the major or minor duct. A specimen was saved for microscopic examination. The dog was then placed upon a high carbohydrate diet for approximately one month, during which time the animal was actively diabetic.

At the second operation, from twenty-six to thirty days later, a specimen of the gland was removed for microscopic examination. These sections showed that the alpha and gamma cells of the pancreatic islands remained in good condition, but that the beta cells showed the presence of so-called hydropic degeneration (Figure 1). The acinar cells remained perfectly normal. Vacuolation of some of the cells lining the ducts was also seen at times (Figure 2). At the close of the second operation, treatment with insulin was immediately started, and subcutaneous injections were usually made three to four times a day. These injections were as evenly distributed

over the twenty-four hours as possible. Each dog was placed on a carefully weighed diet, usually being fed three times a day on lean meat.

A strictly normal level of blood sugar was aimed at and maintained during the whole length of this period. This program was kept up for from twenty-four hours to three weeks, and many specimens of pancreas from different animals were removed at varying intervals.

Allen<sup>15</sup> had previously tried to learn whether the hydropic degeneration of the beta cells of the islands was reversible or not, but was unable to arrive at any definite conclusion, because he stated "if pancreatic tissue is removed at the desired stage of maximal vacuolation, either the diabetes is already hopeless or the slight trauma of the operation makes it so, for it is impossible to stop the glycosuria thereafter, and with continued symptoms rapid destruction of islands occurs."

#### RESULTS

Complete disappearance of hydropic degeneration of the beta cells of the islands of Langerhans and the restoration of the islands to normal was found after a period of fourteen days of insulin treatment (Figures 3 and 4). About the ninth day vacuolation began to subside, but before this period very little recovery could be noticed.

Careless control of the diabetes showed that the functional overstrain on the islands had not been relieved, as they still showed hydropic degeneration. We have reason to believe that hyperglycemia, without sugar in the urine, will prevent the clearing up of the pathological picture of vacuolation of island cells.

Lack of careful control of the symptoms of diabetes in dogs is rapidly followed by acidosis. It is interesting to note that before insulin treatment of diabetes of dogs, it was almost impossible to produce a severe acidosis in these animals. Now it is com-



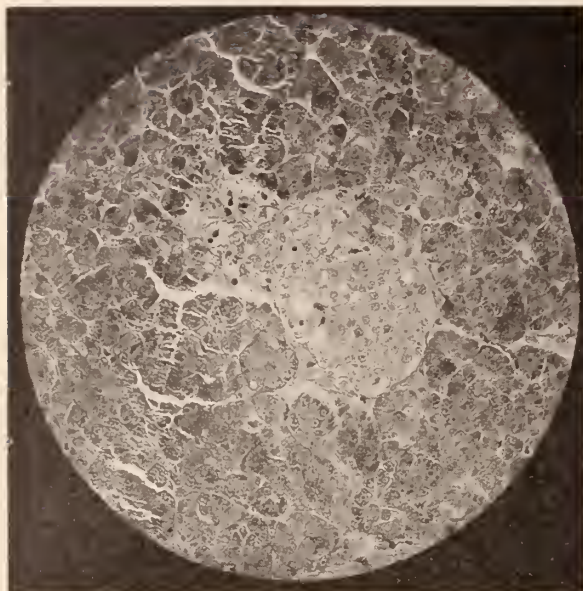


Figure 3

Dog 148. Pancreas showing hydropic degeneration of the beta cells after twenty-eight days of persistent glycosuria.

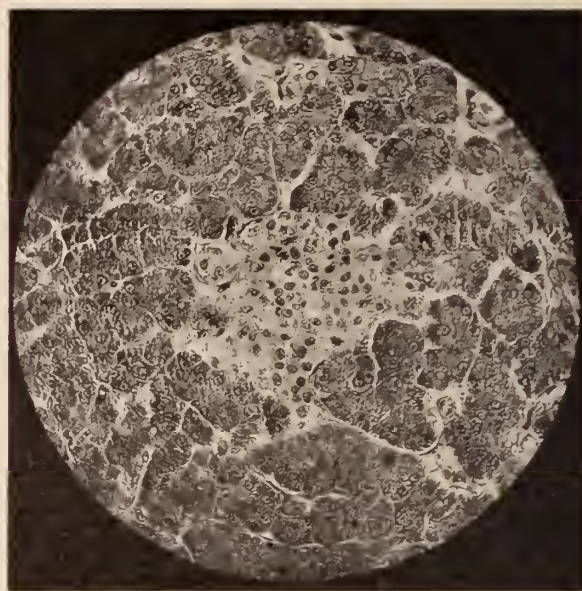


Figure 4

Dog 148 after fourteen days of insulin treatment, showing the restoration of beta cells and the return to normal of the island.

paratively easily done by suddenly stopping administration of insulin, but still keeping on with the same diet.

Severely diabetic dogs can be kept alive indefinitely by means of a careful diet plus insulin.

The glucose tolerance of diabetic dogs under insulin treatments will improve, often remarkably. We have been unable to definitely prove the formation of new islands, but vacuolation observed occasionally in centro-acinar cells and in the small ducts or cell cords seems to suggest an intimate relationship between these cells and the beta cells of the islands. We expect to later report on this relationship more definitely. The diabetic dog thrives best when strictly normal blood sugars are maintained at all times.

#### CO-RELATION TO THE HUMAN DIABETIC

The pathological changes of the pancreas as a result of diabetes, whether seen in the human or the dog, are almost identical. In both cases the beta cells of the islands become vacuolated as a result of functional overstrain. We have seen that the pathological changes of the pancreas of diabetic dogs return under careless control, and we believe the same occurs in the human.

It is, therefore, important to realize that only by careful control and by the maintenance of strictly normal blood sugars can we expect to have the already damaged organ in diabetes functioning at its best. Occasional presence of sugar in the urine means the probability that some of the beta cells of the islands are becoming vacuolated, and if repeated may mean the destruction of island tissue, with a further irreparable loss in food tolerance.

Just what is happening in the patient's pancreas when under good control is an interesting speculation, but when under poor control we most certainly know that specific pathological changes are taking place detrimental to the patient.

#### BIBLIOGRAPHY

1. Mering and Minkowski: Arch. f. Exper. Path. u. Pharmacol., 1889, XXVI, 371.
2. Lewaschew: Arch. u. Entwicklungsgesch. Bonn, 1886, XXVI, 453.
3. Arnozan and Vaillard: Arch. de Physiol. Norm. et Path., Paris, 1884, III, 287.
4. Sscobolew: Arch. f. Path. Anat., etc., Berlin, 1902, CLXVIII, 91.
5. Weichselbaum, A. and Stangl, E.: Wein. Klin. Woch., 14, 1901, 968-972.  
Ibid.: 15, 1902, 969-977.  
Weichselbaum, A.: Sitzungsber. d. Kais. Acad. d. Wissenschaften, Math. Nat. Kl., 119, 1910, 73-281; Wein. Klin. Woch., 1911, 153-159.
6. Opie: Johns Hopkins Hospital Bull., 1901, XII, 263-64.
7. Zuelzer, G.: (a) Experimentelle Untersuchungen über den Diabetes, Berlin Klin. Wochenschr., 1907, XLIV, 474. (b) Ueber Versuche einer spezifischen Fermenttherapie des Diabetes Ztschr. f. Exp. Path. u. Therap., 1908-09, V, 307.
8. Forschbach, J.: Zur Pathogenese des Pankreasdiabetes, Archives f. Exp. Path. u. Pharm., 1908-09, LX, 131.
9. MacCallum, W. G.: Bull. Johns Hopkins Hospital, 1909, XX, 255.
10. Allen, F. M.: Studies Concerning Glycosuria and Diabetes, Harvard University Press, 1913.
11. Knowlton and Starling: Jour. Physiol., 1912, XLV, 146.
12. Murlin: Jour. Biol. Chem., 1913, XV, 365.
13. Banting and Best: Jour. of Lab. and Clinical Med., Vol. VII, No. 5, February, 1922.
14. Baron: Surgery, Gynecology and Obstetrics, XXXI, No. 5, p. 437.
15. Allen, F. M.: J. Metabolic Research, 1, 1922, 1-41. Hydropic Degeneration of Islands of Langerhans after partial pancreatectomy.

#### DISCUSSION

F. G. BANTING, M. D. (University of Toronto, Canada)—In reading Dr. Copp's paper one feels regret that he has not reported upon this important work in greater detail. There is now little doubt that glucose directly stimulates the islets of Langerhans to produce insulin. The histological picture described in this paper provides evidence from the pathological standpoint. It has been found from a physiological standpoint that the secretion of insulin does not necessarily depend upon the nerve supply, since

when a portion of pancreas is transplanted under the skin and depleted of its nerve supply, there is no material alteration in the response to injected glucose. Furthermore, when the percentage of sugar in the blood is suddenly increased the islet cells are stimulated to produce an adequate amount of insulin to reduce the blood sugar to its normal level. From a clinical viewpoint, it has been found that, in cases of diabetes mellitus which have been maintained sugar-free and with a normal blood sugar, there is no decrease in tolerance, and in nearly all cases, particularly in children, there has been a considerable increase in tolerance. On the other hand, in cases which have continually shown glycosuria there is no gain in tolerance, and usually there is lowering of tolerance.

The fact that Dr. Copp has been able to show the complete disappearance of hydropic degeneration of the beta cells of the islets of Langerhans in partially depancreatized dogs by insulin treatment is of great importance, because it provides experimental evidence which supports the clinical findings that, in order that there be a gain in tolerance, the islets of Langerhans must be relieved of all strain.

FREDERICK M. ALLEN, M. D. (Physiatric Institute, Morristown, New Jersey).—The importance of the study of pancreatic pathology cannot be overestimated. The hydropic degeneration of island cells can be easily and clearly demonstrated. It is biologically unique as an example of anatomic degeneration, due to overstrain of an endocrine function. It is one of the strongest links in the proof that the anti-diabetic function of the pancreas actually resides in the islands. Experiments like those of MacCallum are not decisive, because the ligated pancreas remnant of the dog never consists exclusively of island tissue. A strong support is furnished by Macleod's observations in fish, that insulin is obtainable from the portions of the pancreas which contain islands, and not from the portions containing no islands. But the ability to produce specific island changes at will by dietary overstrain, and to arrest these changes by relieving the overstrain, is so significant that these simple experiments should be tried by those pathologists who still doubt the island theory of diabetes.

The occurrence of this same degenerative process in experimental animals and in human patients likewise ranks among the important proofs of the identity of experimental and clinical diabetes. It has several fundamental therapeutic applications. It furnishes the anatomical explanation of the progressiveness of diabetes. One of the traditional errors that was hardest to overthrow was the belief in the inherent progressiveness of diabetes. There is now agreement of experimental and clinical proof that diabetes is progressive when the island function is overtaxed, and is not progressive when that function is spared. The means of overtaxing the function are also significant. Not only carbohydrate, but also the total calories and body weight influence the island function in both dogs and patients. It is unfortunate that it should still be necessary to repeat this very simple and easily demonstrated fact. Increased calories in the form of fat increase the tendency to glycosuria and acidosis, and increase the insulin requirement in both patients and animals. The pernicious fad of high fat diets rests only upon inconclusive observations that some patients can be freed from glycosuria and acidosis, in spite of such diets. Accurate comparisons of low and high fat diets have never failed to confirm this fact, which, besides its practical importance, has a deep theoretical significance with reference to the role of insulin in the bodily chemistry.

LOVELL LANGSTROTH, M. D. (490 Post Street, San Francisco).—Dr. Copp brings us experimental proof of the importance of maintaining a normal blood sugar in diabetic dogs. Diets which throw a functional overstrain on the islands lower the tolerance of the animal apparently by causing degeneration of the beta cells. Diets which maintain a normal blood-sugar level often result in a marked gain in tolerance, and this we now know is associated with disappearance of the degenerative changes. This fits in exactly with the clinical facts, and there is every reason to suppose that his results are directly applicable to humans.

In clinical diabetes we see different responses to the

same treatment. In two properly treated cases of the same severity one will show a marked increase in tolerance; the other none. This appears to be due to some inherent difference in the cells of the two individuals, to an ability in one to "come back" under rest, in other words. This difference in regenerative power brings up some interesting problems. Is this the same tissue quality which makes one individual so resistant to diabetes that his tolerance falls very slowly over the course of years, while another offers no barrier to its progress and soon becomes a total diabetic? If we may speak of diabetes as a degenerative disease, is the resistance to this degeneration largely a question of inheritance as the occurrence of severe infantile diabetes would certainly make it appear? And if we inherit poor resistance to such degeneration, what are the factors in the lives of parents which withhold this essential quality from the offspring? In this connection the new experimental work on food and sunlight in animals comes to mind at once. One wonders whether the second or third generation of rats fed on suboptimal diets and showing diminution in size, vigor, and fertility, might not be made to show some such marked loss of resistance to degeneration as is evidenced in a diabetic infant.

These problems are at the root of our understanding not only of diabetes, but of all degenerative diseases and such interesting experimental work, as this gives us hope of their solution in the near future.

JOHN R. WILLIAMS, M. D. (388 Monroe Avenue, Rochester, New York).—That insulin may have some regenerative or restorative action on the pancreas has been the hope of every worker in diabetes. Clinical evidence is slowly accumulating which suggests that such action is taking place. I have a series of both children and adults who were carefully controlled and whose limitations were established before the advent of insulin. The increase of pancreatic efficiency is more evident in adults than in children, although general clinical improvement is striking in both groups.

The value of maintaining the body chemistry as nearly normal as possible in diabetes can scarcely be questioned. The difficulty of so doing in severe cases is another matter. If it has to be done at the cost of marked undernutrition, it is an open question. The cases in my series who are permitted to maintain an approximately normal nutrition not only feel better, but appear clinically improved, and show no evidence of breaking down. Some of these cases have carried high blood sugars and urine sugar, and in other ways have violated the conventional beliefs as to the importance of diabetic standards. It should always be borne in mind that insulin activity in the body and glucose metabolism rarely synchronize; that the severe and uncontrolled diabetic under insulin therapy during the day may have periods of hypoglycemia as well as hyperglycemia. These alternating states may not be without benefit to the severe patient, particularly if a good state of nutrition is maintained. In some of my severe cases there is evidence to support this possibility.

My clinical experience is not in accord with that of Dr. Allen, if I understand him correctly. Without insulin, on the plan of undernutrition alone, my cases were greatly benefited for a considerable period of time; eventually they failed, and although the expectancy of life was extended as much as 100 per cent, the disease progressed and the patient finally succumbed either to inanition or the diabetes. In have noticed no such regression since the use of insulin.

Dr. Copp's work is timely and extremely important. It affords experimental proof for the clinical observation of a number of workers. It should be extended to throw light on the problem of the source and regeneration of the islets. The very great desirability of careful autopsy study of all insulin-treated diabetics who may succumb either to diabetes or other causes must be evident in this connection. The Scripps Metabolic Clinic is to be congratulated on the character of its research.

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What a paradox that the very man to whom the world looks for advice as to proper food, rest and exercise, must eat cold grub grabbed on the wing, sleep hanging on a hook by the telephone, and depend for his exercise on cranking the fivver.—Medical Pocket Quarterly.



## TREATMENT OF ACUTE PERITONITIS

By ALANSON WEEKS AND LE ROY BROOKS\*

DISCUSSION by *Walter W. Boardman, San Francisco; Charles Miner Cooper, San Francisco; E. C. Fleischer, San Francisco.*

THE diagnosis of acute, infectious, spreading peritonitis is usually verified at operation. The operative treatment is more or less standardized, but it should be emphasized again that the least the surgeon does the better; especially should he handle the tissues gently. His procedure necessarily varies with the individual case.

The question of drainage occupies a more important position in the current literature. Just when to drain and when not to drain is sometimes difficult to decide, and there are many factors which contribute to the final judgment, such as operative trauma, the amount of inflammatory tissue remaining, the location of the lesion, the general condition of the patient, etc. One would judge from the publications that drainage is used less often by many men than formerly. However, when in doubt, a drain does little or no harm and establishes a channel through which nature is able to throw off much of the toxin which otherwise might have to be absorbed. The drain can be removed within two or three days. Should a secondary abscess develop, it will, if left alone, practically always break through this channel. If not, one can find the abscess by inserting a curved hemostat with great gentleness, allowing the end to find its way through the drainage tract and then opening the forceps. In nine times out of ten pus will escape. In our work it has never been necessary to reopen the abdomen for such an abscess, so that the unhappy experience of opening an abscess into the clean peritoneal cavity has not been observed.

The first thought in the treatment of peritonitis should be that the bowel must be kept at rest. Usually it is paralyzed, but laboratory workers have shown very conclusively the effect on peristalsis when anything is taken into the stomach; and, therefore, because of the possibility of starting peristalsis, and also because of the greater possibility that the stomach will refuse it, nothing should be given by mouth.

Doctor J. Wilson Shiels said, many years ago, that a hurt peritoneum should be splinted just as much as a broken leg.

Wet dressings, applied directly to the wound, promote better drainage. Large, wet, hot com-

presses applied to the whole abdomen, changed often, and kept as hot as the skin will bear, afford a patient comfort, and from a clinical standpoint do seem to have a definite value in this condition.

The abdominal distention which often occurs, due to paralysis of the intestine, is very distressing to both the patient and the doctor. One is apt to become panicky and resort to pituitrin, eserine, irritating enemas, etc., in an effort to relieve the pressure. Sometimes, with these measures one can get rid of considerable flatus, but within a few hours the distention is as great, or greater than before, and much more difficult to relieve. The irritation of the already sick intestine causes a more complete paralysis than would have occurred had it been left alone. When simple tap water enemas or tap water colon irrigations do not relieve the distention, it is futile and harmful in the presence of peritonitis to use more drastic measures.

It is essential to give these patients enough morphine for rest, but it is not wise to give large doses repeated often (as practiced by some) to keep the patient in a semi-conscious state or to reduce the respirations to ten or twelve per minute. This amount of morphine has too paralyzing an effect upon the bowel and reduces oxidative processes, which allows one to reason fairly that the patient's resistance would be lowered. The other extreme, not giving the patient rest by a sufficient amount of sedative, is probably as bad, as the patient exhausts himself tossing about from pain.

In the absence of abdominal distention, or spreading peritonitis, we do not allow the patient to have anything by mouth. When the upper intestinal content appears in the stomach, it should be removed by gastric lavage every three or four hours, or the stomach should be continuously drained with a duodenal tube strapped to the chin with a piece of adhesive. The patient can then drink all the water desired and automatically wash the stomach. The lavage should be given early and often, and careful observation will enable one to determine that the stomach should be washed before the patient begins to vomit the dark material. Generally speaking, this is not done early or often enough.

The funnel drip, 5 per cent soda bicarbonate and 5 per cent glucose, is given to all these patients as a routine. When the drip is properly operated, the patient will absorb considerable fluid, alkali and nourishment through the bowel, and it is a simple thing for both patient and nurse, by means of colon irrigations repeated often, to remove the flatus that works its way down to the large bowel. Often, however, the patient will not absorb enough fluid from the rectum to give the best chance of recovery. To such patients we give 1500 to 2000 cc. normal salt solution beneath the fascia lata of the thighs daily, and 1000 cc. 10 per cent glucose intravenously once or twice a day. This method of furnishing fluids and fuel has been used for the last five years, and no case of general peritonitis has been lost in this time among many patients whom we believe would certainly have died without the fluids, salt, and sugar.

These patients suffer from the poison that they absorb from infection, from the acid products of

\* Alanson Weeks (384 Post Street, San Francisco). M. D. University of Michigan. Practice limited to Surgery. Hospital connections: St. Luke's, Children's, United States Marine hospitals, and United States Veterans' Bureau, San Francisco. Publications: "Congenital Pyloric Stenosis" (California State Journal of Medicine, July, 1921); "Glucose and Alkalies in Surgery" (California State Journal of Medicine); "Pyloric Stenosis" (Surgical Clinics of N. A.); "Bowel Obstruction Following Operations Occurring During Convalescing Period" (California and Western Medicine); "Large Intrascapular Hemorrhage of Liver" (Surgical Clinics of North America); "Congenital Pyloric Stenosis" (International Clinics); "An Unusual Case of Pyloric Stenosis" (California and Western Medicine).

Le Roy Brooks (384 Post Street, San Francisco). M. D. Marquette University, 1920. Practice limited to General Surgery. Director Out-patient Department, St. Luke's Hospital. Publications include: "Uses of Glucose and the Alkalies in Surgery"; "Bowel Obstruction"; "Pyloric Stenosis." All in California and Western Medicine.

faulty fat metabolism due to lack of sufficient carbohydrates, from by-products from excessive breaking down of body proteins in an effort to furnish the carbohydrates, and to lack of oxygen carried to the tissues because of increased viscosity of the blood due to loss of body fluids. When there is much vomiting or necessity for having the stomach washed often, it is not uncommon for an alkalosis to develop, which, if not properly combated, will go on to tetany and death. The proper treatment is large quantities of sodium chloride, or, what we have found equally as effective and more prompt in action, 5 per cent calcium chloride, 50 per cent cc. of a 5 per cent solution is given together with 1000 cc. 10 per cent glucose intravenously and 1500 to 2000 cc. salt solution injected into the muscles within a few hours, omitting, of course, at the same time the bicarbonate of soda from the rectal drip.

If the condition becomes critical and acidosis evident, we give 10 per cent glucose solution, 2000 to 4000 cc. daily, with enough insulin to burn the excessive amount of sugar, some of which otherwise would be excreted.

Mann and his co-workers recently established the fact that dogs, after the removal of the liver, developed a definite chain of symptoms, consisting of muscle weakness, loss of reflexes, return and exaggeration of reflexes, muscle-twitching, jaundice, coma and general convulsions, in one of which the animal would die within two hours after the first signs of muscle weakness. There was a definite relation between the blood-sugar level and these symptoms. The symptoms began when the sugar content was .06 to .04, and the dog died when it reached .03. Accompanying this reduction of blood sugar, the glycogen content of the liver and voluntary muscles was reduced to 50 per cent. The symptoms could be relieved by injecting intravenously .25 to .5 grams of glucose per kilogram body weight. Within thirty seconds after the injection, the dog would stand, walk, respond to call, wag its tail, drink water, etc. These beneficial results were specific for glucose or substances that yield glucose; and after the injection, when the blood sugar again began to fall, the symptoms would reappear in the order as given, and could be relieved by further injections of glucose.

Finally, a second group of symptoms developed, consisting of restlessness, ataxia, loss of sight and hearing, coma, and the dog died quietly. Glucose injection was without beneficial result, as far as this last group of symptoms was concerned.

The first chain of symptoms could be prevented if the blood sugar were kept to normal level by injections of glucose, but the second group of symptoms develop from eight to twenty-four hours after the removal of the liver, and the animals died quietly. The dogs formed no further appreciable amount of urea, and possibly the second group of symptoms was due to the disturbances in the protein metabolism. They all developed definite jaundice, and the pigment in the urine, in the blood plasma and in the tissues, gave all the tests for bilirubin, showing that this substance can be formed without the liver.

There is a definite similarity between the symp-

toms developed by these dogs and those developed by starved, toxic patients. Both are restless, jaundiced, mentally deranged, have twitching and go into coma, and both are relieved by glucose.

It will be evident from this report that we have had a large number of patients with general peritonitis who were unable to take any fluids by stomach and very little by bowel, and therefore practically no nourishment; who have been kept alive (some as long as two weeks) until the body was able to overcome the infection and peristalsis had started normally again.

We are not referring to the ordinary type of peritonitis, localized and short in its seriousness, but to patients often comatose, such as were formerly always lost.

We owe a great debt of gratitude, and as clinicians we should more often admit it to the patient laboratory worker who has so beautifully shown how necessary it is to keep up the body fluids that the blood may carry oxygen; how necessary it is to give glucose that the liver shall not be completely robbed of its glycogen; how necessary it is to keep up the chlorides by giving either sodium or calcium chlorides; and also for his work in demonstrating the necessity of keeping things out of the stomach that the bowel may rest in the presence of inflammation.

A few histories of patients are given as types:

Mrs. M. B. This patient was 25 years of age. She had typical, old, long-standing, large, double pus tubes.

At operation, both tubes were found to be large and full of old pus. These were removed.

At this time there was considerable discussion concerning the safety in closing this type of case. The wound was finally closed without drainage, but the subsequent history showed that, under similar circumstances, this procedure should never be repeated.

Five days after the operation, the patient developed spreading peritonitis, and the upper intestinal contents had to be washed constantly from the stomach. The wound, of course, was open, with a free discharge of pus.

On the seventh day she became stuporous and was in coma a great part of the time. She was given 1000 cc. normal salt solution subcutaneously daily, and an equal amount of 10 per cent glucose intravenously each morning. With this treatment she showed improvement as manifested by her pulse, facial expression, and mental condition. She had a definite tinge of jaundice to the skin and the whites of her eyes. Her pulse varied from 110 to 160, and her temperature from 101 to 104. The abdominal distention was tremendous, and little gas could be removed by irrigations or enemas. The stomach was washed three or four times a day.

The patient was in coma and many of the treatments were given without arousing her, and when she recovered she had no knowledge that they had been given.

From the tenth to the fourteenth day post-operative, she slowly but definitely improved. She was given 1000 cc. 10 per cent glucose daily and 1000 cc. normal salt solution daily. After the start of peristalsis, it was no longer necessary to wash the stomach, and the patient gradually took fluids and soft food by mouth after the peristalsis began to go through normally.

During these stormy weeks of keeping her alive with glucose and normal salt solution, when she was unable to take anything by mouth or bowel, pus drained freely from the abdominal wound. Large, hot compresses were applied to the whole abdomen throughout this bad time. Five per cent glucose and 5 per cent soda bicarbonate solution was given by the funnel method by rectum whenever possible, but because of the mental state of the patient, and because of the constant irrigations to relieve the distension, very little absorption could be counted upon. After the first two weeks, her convalescence was



uneventful, except for prolonged drainage from the abdominal wound.

The patient was well when she left the hospital in March, 1921. She had entered the hospital for this simple operation in December, 1920.

M. F. The patient, a little girl 10 years old, was seen on August 6, 1925, in consultation with Dr. E. C. Fleischer. She had two small boils on the lower third of the left leg and an infection of the vagina, with a discharge. She had had the vaginal discharge for about a week. It was yellowish and had a foul odor. Her brother and father had just recovered from a number of boils, the first of which the father had following a nose operation, probably due to a pack being left in his nose several days.

Alcohol and glycerine dressings were applied to the boils on the leg, and permanganate douches given for the vaginal discharge.

The following day the patient had developed pain in the pelvis and lower abdomen, undoubtedly due to the extension of the infection of the vagina upward. She was sent to the Children's Hospital, and on entrance had a temperature of 104.8, pulse 110, and respirations 40. Hemoglobin, 64 per cent; red blood corpuscles, 3,100,000; white corpuscles, 10,200; polynuclears, 70 per cent; lymphocytes, 30 per cent. She was put in extreme Fowler position, and hot compresses were applied to the whole abdomen. She had a profuse diarrhea, and we were unable to give any fluids per rectum. Nausea and vomiting prevented giving any fluids or food by mouth.

The next day the temperature remained 104.5, pulse 125, and respirations 40. The abdominal pain had increased in severity, and the abdomen was boardlike well up above the umbilicus. Nausea and vomiting continued. Patient was given 500 cc. 10 per cent glucose twice daily for the next five days, with 1000 cc. normal salt solution in the thighs daily. During this time she continued to be nauseated, and was unable to retain fluid. The abdominal rigidity became more marked and extended up to the diaphragm. The temperature ranged from 104 to 100.5, the pulse from 130 to 110, and respirations from 40 to 30. Cultures of the vaginal discharge showed pure streptococci. The patient had the definite drawn facies of peritonitis and cramping pains in the abdomen which were almost unbearable.

On August 13, five days later, she was given 275 cc. of whole blood, her father acting as donor; both patient and father, Group IV. There was no cross-agglutination. The blood was given because of the fact that the hemoglobin was only 60 per cent, 3,000,000 reds, and also because of the possibility that the father's blood might contain some antibodies, which might be of great value to the patient's resistance, since he had just recovered from what we presumed to be the same type of infection.

The next day the child's condition was about the same, possibly a little improved. Her temperature was 100.4, and remained below 101 for the next four days. She received 500 cc. 10 per cent glucose daily, and 1000 cc. normal salt solution intramuscularly. The abdominal pain became less severe. There was less rigidity of the abdomen, nausea ceased, and the patient was given water and liquid foods by mouth. She continued to improve for the next week, and on August 25 looked and felt much better and was able to take food normally. She still had some infection of the urinary bladder. Temperature, pulse, and respirations remained more nearly normal and her progress was quite satisfactory.

On September 11, rectal examination of the pelvic organs showed a mass the size of a small orange in the middle and posterior. This was no doubt the uterus with inflamed tubes and ovaries in one mass, which was hard, and there was no sign of fluctuation. The patient was having no fever, and the leukocyte count was normal. Advised leaving the mass alone until it became very much enlarged and fluctuated, and then it would be sound judgment to leave it alone some more.

We are aware of the fact that the diagnosis of peritonitis in this case is open to challenge, but the infection began in the vagina, in the pelvic peritoneum and gradually extended upward toward the diaphragm, the muscle spasm and rigidity were boardlike, she was

slightly jaundiced, restless and in a deep stupor at intervals, and had the typical drawn facies of peritonitis. We have a reasonable right to call this streptococcal peritonitis, as we found a pure culture of this organism in the vagina. Such cases of peritonitis are usually fatal when operated upon.

We feel that this patient was kept alive with glucose intravenously and fluid intramuscularly for two weeks, during the time when her stomach refused all foods, and nothing could be given by bowel because of the diarrhea, until the body had overcome the infection and normal peristalsis started again.

Mrs. W. Age, 25 years. Entered Dante Sanatorium August 18, 1924.

*History*—The patient was taken ill three days before entering the hospital with pain in the abdomen, nausea, and vomiting. About twenty-four hours after admission, the pain was localized in the right side. The pain became very much better during the last eight hours of this period, at which time the appendix probably ruptured.

*Examination*—Examination disclosed a boardlike abdomen with a great deal of pain in the pelvis and in the right iliac fossa. Urine: Showed 1 plus albumin. Occasional pus cells. Blood: White, 20,800; 88 per cent polys. Temperature: 101.5. Respirations: 28.

*Diagnosis*—Peritonitis from ruptured appendix.

*Operation*—August 18, 1924, 6 p. m. Lower midline incision. The appendix presented readily, and was wrapped with a heavy fold of omentum. This portion of the omentum was ligated and removed with the appendix. The pelvis was filled with yellowish, foul-smelling fluid. A rolled rubber drain was placed in the cul-de-sac, and one in the right iliac fossa, and the abdomen closed in the usual manner.

*Post-operative History*—The peritonitis gradually extended toward the diaphragm. By the fifth day post-operative, the upper intestinal contents had to be washed from the stomach four or five times every twenty-four hours. The abdominal distention became very great, and all attempts to relieve the pressure by colon irrigations, enemas, etc., were futile.

The drains were removed on the fourth day and one of the non-absorbable sutures extracted, which allowed the abdominal wound to open freely for drainage. Wet dressings and hot stoops were applied to the whole abdomen. The stoops were changed every two hours and were continued for two weeks. For the first two weeks, the patient's temperature ranged from 99 to 101; the pulse from 110 to 150; and the respirations from 28 to 40.

*August 22, 1924*—The patient became jaundiced, very restless, picked at the covers, and stated that she did not feel like herself. In her own words, she said: "I feel goofy."

She was given 1000 cc. 10 per cent glucose intravenously. The patient noted a great improvement, and the nurses remarked about the definite change in the expression of her face.

*August 23, 1924*—Abdominal distention was as great as we have ever seen. During the next twenty-four hours, the patient received 3900 cc. 10 per cent glucose intravenously and 1300 cc. normal salt solution intramuscularly.

Total measured intake, 5200 cc. Measured output, 2000 cc. urine.

*August 24, 1924*—Patient's condition was about the same. Within the twenty-four hours she received 4000 cc. 10 per cent glucose intravenously and 1400 cc. normal salt solution intramuscularly.

Measured fluid intake, 5400 cc. Measured output, 2000 cc. urine.

*August 25, 1924*—Patient was about the same, except that she developed hiccough. Her stomach was washed more frequently for a few days following this, which relieved the hiccough. During this twenty-four hours she received 4400 cc. 10 per cent glucose intravenously and 1600 cc. normal salt solution.

Measured fluid intake, 6000 cc. Measured output, 2450 cc. urine.

*August 26, 1924*—Patient slept poorly during the night, in spite of morphine and heroin, which was given plentifully. She received 4700 cc. 10 per cent glucose intra-

venously and 1400 cc. normal salt solution intramuscularly.

Measured fluid intake, 6100 cc. Measured output, 5700 cc. urine.

*August 27, 1924*—Patient seemed somewhat improved. She was given 5100 cc. 10 per cent glucose intravenously and 1200 cc. normal salt solution intramuscularly.

Measured fluid intake, 6300 cc. Measured output, 5000 cc. urine.

It was noticed that after each injection the drainage of pus from the abdominal wound was more copious and possibly a little thinner.

*August 28, 1924*—Patient was definitely better. There was no more nausea nor vomiting. She was given 4800 cc. 10 per cent glucose, and was allowed to have 300 cc. of water by mouth which she retained.

Measured fluid intake, 5100 cc. Measured output, 4900 cc.

*August 29, 1924*—Patient showed further improvement. She received 2400 cc. 10 per cent glucose, 2200 cc. normal salt solution, and 5400 cc. fluid by mouth.

Measured fluid intake, 9800 cc. Measured output, 6300 cc.

It is interesting to note that the patient drank more than five quarts of water during this twenty-four hours, in spite of the fact that she had received the large quantities of fluids daily, as stated above.

*August 30, 1924*—There was further improvement in patient's condition. She was given 2000 cc. 10 per cent glucose intravenously and 1800 cc. water by mouth.

Measured fluid intake, 3800 cc. Measured output, 3500 cc.

*August 31, 1924*—Intravenous glucose and normal salt solution omitted. Large quantities of fluid were given by mouth.

*September 1, 1924*—Patient again became restless and mentally sluggish, and stated that she did not feel well. She was given 2000 cc. 10 per cent glucose, and was so completely changed within an hour that it could hardly be believed. It was particularly noticeable in her mental attitude, the expression of her face and voice. Following this, the patient took fluids and nourishment by mouth and made an uneventful recovery.

*October 8, 1924*—Patient left the hospital.

E. P. This patient, a girl 4 years of age, entered the Children's Hospital October 30, 1922.

We saw her in consultation with Dr. Langley Porter shortly after she entered the hospital. Doctor Porter had seen her for the first time half an hour before. The child's family gave a rather typical history of acute appendicitis, including abdominal pain, nausea and vomiting.

Examination disclosed a well developed, well nourished child, with a greatly distended abdomen; with general peritonitis, apparently from a ruptured appendix. Patient's general condition was not very good. Blood: White, 35,900; 88 per cent polynuclears; 12 per cent lymphocytes. Urine: 1 plus albumin. Positive for diacetic acid and acetone. Temperature: 103.8; pulse, 116; respirations, 38.

*Operation*—October 30, 1922. Upon opening the peritoneum, free pus exuded and there was no localized abscess. The appendix was removed and drain inserted at the site of the cecum and into the pelvis.

Patient was given 200 cc. 3 per cent glucose solution, subcutaneously, while on the operating-table.

On October 31, 1922, the patient developed great abdominal distention. The pulse was around 140. Respirations, 36.

November 1, 1922, the patient seemed somewhat better. Considerable gas expelled with the aid of pituitrin,  $\frac{1}{4}$  cc., SS., turpentine and alum enemas, the use of which we now consider a mistake. Following this first panic of ours, no further irritating enemas or pituitrin were given.

November 4, 1922, the patient showed some improvement, but distention was still marked. The pulse was 116. Respirations, 30. The stomach was washed repeatedly.

On November 5, 1922, the patient was about the same, except that she was stuporous and comatose at times. The stomach was washed, as indicated.

November 6, 1922, the patient was still in a comatose state. She could be aroused with difficulty. Pulse, 116. Respirations, 32. Temperature, 100. Five hundred and fifty cc. 10 per cent glucose given intravenously.

Patient still having gastric lavage two or three times a day. Unable to retain anything by mouth. Three hundred cc. 3 per cent glucose solution given subcutaneously in the evening.

On November 7, 1922, the patient was still comatose at intervals. Six hundred cc. 10 per cent glucose was given intravenously and, as before, the patient showed marked improvement in her facial expression and in her talk with her mother. Five hundred cc. normal salt solution was given intramuscularly in the thighs.

On November 8, 1922, the patient's condition was about the same. Five hundred cc. 10 per cent glucose was given intravenously. Patient has had hot compresses to the abdomen since the second day after the operation. She received 500 cc. 10 per cent glucose up to November 13.

On November 13, 1922, because of the fatness of her arms, it was difficult to find veins after we had used them so often; and as the patient was improved, we discontinued the glucose intravenously, but continued the normal salt solution intramuscularly. By November 15, 1922, the patient was back in a deep state of coma, at which time she was given 250 cc. of whole blood.

On November 16, 1922, the child was very much improved, showing the great value of whole blood transfusions, which we now use very often in cases of long infection.

On November 17, 1922, 500 cc. 10 per cent glucose was given intravenously.

On November 18, 1922, the patient's condition was very much improved. She was able to retain fluids by mouth.

The child steadily improved following this, and left the hospital on December 5—she had been operated upon October 30, 1922. It is evident that this child took almost nothing by mouth and very little by bowel, and that she was kept alive by the intravenous use of glucose and fluids intramuscularly.

#### DISCUSSION

WALTER W. BOARDMAN, M. D. (350 Post Street, San Francisco)—The authors have rendered a valuable service in bringing so strikingly to our attention the happy results that may follow the treatment of acute spreading peritonitis by the bold, persistent and judicious application of modern methods.

The general principles underlying this treatment are the same as for any acute spreading infection, namely, fixation and general supportive measures which influence the outcome of the conflict between the infecting organisms and the infection-resisting forces of the body. However, in view of the fact that this particular inflammation most frequently occurs following the perforation of some intraabdominal organ, and that as a result of the perforation and the following peritoneal inflammation the functional usefulness of the gastro-intestinal tract is completely, or almost completely, destroyed, two special problems have to be faced. The first has to do with the treatment of the perforation, the second with the maintenance of anything approaching a normal metabolism in the presence of a useless gastro-intestinal tract.

The treatment of the perforation is always surgical if seen early; later it may require the most skilful clinical judgment to determine correctly whether the surgical treatment of the perforation, or the non-surgical treatment of the peritonitis, is the more pressing. An error in judgment here may mean the loss of a life. The less frequent cases of peritonitis of hematogenous origin and the commoner cases secondary to pelvic inflammatory conditions are generally recognized as non-surgical during the acute stage.

Reverting for a moment to the fundamental principle of our treatment—fixation of the abdominal contents, especially the intestines—we find that nature does her best to accomplish this end. However, we may assist by supplying a good bed allowing the Fowler position, by administering opium as necessary to depress any persisting peristalsis or to control pain or restlessness, by withholding all food by mouth, by early frequent or con-



tinuous gastric lavage for distention or vomiting, by the avoidance of all peristalsis-increasing drugs, and by the most cautious use of stimulating enemas. The free use of external heat may act as a local circulatory stimulant and tend to decrease abdominal distention thereby.

Under general supportive measures, we are confronted with the difficult problem of maintaining something approaching a normal body metabolism in the presence of a serious infection and a practically useless gastro-intestinal tract. Without special measures, these patients become dehydrated, may develop a starvation acidosis or an alkalosis from excessive vomiting. Our indications are then, first, the administration of liberal amounts of fluid per rectum, subcutaneously, or intravenously. Second, the administration of some nutritive substance and glucose either per rectum or intravenously has been amply demonstrated to be the only substance worthy of serious consideration. The use of bicarbonate of soda has gained more or less general acceptance, but there is some question as to its desirability as a routine, and it is definitely contra-indicated in threatened alkalosis. It must not be overlooked, and there is a real danger of circulatory embarrassment from the intravenous injection of large amounts of fluid. It must finally be emphasized that help from these measures can only be obtained if they be intelligently used, the special indication in each case being carefully considered.

The authors' explanation of the clinical manifestations of acute spreading peritonitis on the basis of Mann's experimental work is interesting and suggestive, but not convincing, as it is evident that there are many points of dissimilarity between a dog with a total absence of the liver and a man with an acute spreading peritonitis. So far as I know, there have been no careful blood sugar studies in cases of this type, and it is to be hoped that such a report will be forthcoming.

The case reports, four in number, are instructive and interesting, and happy in their outcome. It would be of value to have an accurate statistical study of a large series of such cases. However, as the authors state, these methods merely keep the patient from dying from dehydration, acidosis, etc., while the body is overcoming the infection, and it must be apparent that so long as our treatment is purely symptomatic and not specific we must inevitably have a certain percentage of fatal cases, no matter how skilfully these symptomatic measure are applied.

CHARLES MINER COOPER, M. D. (Butler Building, San Francisco)—I fully agree with the principles of treatment as outlined by Drs. Weeks and Brooks. The experimental and laboratory work which they quote would seem to indicate that the therapy they recommend might be of service. An extensive experience has satisfactorily demonstrated to them its great clinical usefulness. I cannot but accept their conclusions and congratulate them on their results, but would emphasize the great importance of the proper preparation and administration of this as of other solutions for intravenous medication; otherwise disastrous reactions may occur in a percentage of patients that would make their use risky and perhaps inadvisable.

It would seem to me wise if Weeks and Brooks would tell us something concerning the nature of the reactions that may occasionally occur, how to avoid them, and how to combat them.

E. C. FLEISCHNER, M. D. (384 Post Street, San Francisco)—Many years ago Roger showed that the toxic effects of most poisons manifest themselves with much greater severity in animals that have been starved than in those whose livers contained a certain amount of glycogen. This observation has been verified many times, so that the work of Dr. Weeks and Dr. Brooks confirm observations that have been previously on animals.

Concerning the effects of bacterial toxins among infections in childhood, more deaths occur as a result of dehydration and starvation than from any single cause, and there is no question whatsoever but that the harmful effects of bacterial toxins can frequently be neutralized by the body when it has at its disposal sufficient glycogen and sufficient water, whereas without these substances its resistance is too low to overcome the invading bacteria.

## THE CLINICAL SIGNIFICANCE OF BUNDLE BRANCH LESIONS

By ARTHUR STANLEY GRANGER \*

*An analysis of recent literature of outstanding merit and a study of thirty-five cases of this serious disorder, which may be diagnosed with certainty only by the aid of electrocardiographic examinations.*

DISCUSSION by George Dock, Pasadena; Gordon E. Hein, San Francisco; Howard F. West, Los Angeles; John J. Sampson, San Francisco.

DURING the past four years I have had occasion to observe thirty-five cases showing electrocardiographic signs, indicative of a lesion involving one of the main branches of the bundle of His. Because this lesion is of such serious import from the standpoint of a very high mortality rate, and because the electrocardiograph is the only known means of disclosing its presence, it is worth while to discuss briefly the facts known in connection with the pathology of these lesions, and the mechanism of production of their electrocardiograms, in addition to reporting the clinical findings in the above mentioned group.

These bundle branch lesions are recognized by certain changes in the form of the normal QRS syndrome of the electrocardiogram, resulting in aberrant complexes of more or less definite type. Since the work of Eppinger and Rothberger in 1909 they have been considered as indicative of disturbances of intra-ventricular conductivity. These investigators observed that while destruction of relatively large portions of the ventricular muscle by injection of silver nitrate did not, in some instances, change the form of the electro-cardiogram, in other experiments relatively small lesions produced marked changes. They further observed that the lesions producing the most marked change were in the neighborhood of the larger branches of the conduction system, and later by severing the branches of the bundle of His they were able to produce aberrant complexes in the electrocardiograms. Along with their experimental work, they were on the constant lookout for clinical cases showing such bizarre QRS syndromes, and fortunately five such cases were observed about the same time by Eppinger and Stoerk, and two of these came to autopsy. Both showed lesions which completely blocked the right branch of the bundle of His, while the left branch was normal. The direction, breadth and amplitude of the QRS deflections in repeated electrocardiograms from both the above cases are typical of reproductions since made experimentally by severing the right branch of the conduction nerve. Further investigations by Rothberger and Winterberg, Cohn and Lewis and Lewis have tended to confirm these findings in all essentials, so that at the present time there seems to be no question of the identity of these lesions. More recently, Wilson and Hermann

\*Arthur Stanley Granger (2007 Wilshire Boulevard, Los Angeles). M. D. Rush Medical College, 1909. Practice limited to Internal Medicine. Hospital Connections: St. Vincent's, and Los Angeles General Hospitals. Appointments: Cardiologist, U. S. V. B. Publications: "Concerning the Presence of Certain Pressor Substances in the Urine" (Arch. Int. Med., July, 1912), "Dispensary Treatment of Diabetes" (California State Medical Journal, 1917). Chairman's Address—Section on Medicine (California and Western Medicine, 1924).

and Smith have conducted experiments which have thrown considerably more light on the mechanism of the production of the very interesting electrocardiographic signs typical of a destructive lesion involving one of the main branches of the conduction bundle.

Normally, the excitation impulse passes from the auricles by way of the bundle of His and its main branches along the interventricular septum and through the larger and smaller subdivision of these branches into the Purkinje network which lies beneath the endocardium of each ventricle. From this network the impulse passes outward into the ventricular walls. The speed of the impulse through the Purkinje tissue is about ten times its speed through the ventricular walls, so that the impulse spreads rapidly along the endocardium of the septum to the apex and thence upward along the network in the endocardium lining the outer walls. The subendocardial muscle is activated in the same order. It will be seen, therefore, that the time of appearance of the excitation wave on the epicardial surface of the ventricles will depend somewhat on the thickness of the ventricular muscle. Lewis has shown that cutting the right branch of the bundle of His caused a considerable delay in the spread of the excitation wave over the right ventricle; at the same time there was no delay in the activation of the left ventricle. This delay is caused by the absence of any connection between the conducting networks of the two ventricles below the main stem of His bundle, so that when the right branch is cut the excitation impulse can only reach the right ventricular Purkinje system by passing through the muscle of the ventricular septum. *It is, therefore, the slow rate of travel through the septum that causes the increased QRS interval of bundle branch block.*

What now are the characteristics in the electrocardiogram typical of a lesion involving one of the bundle branches? Carter gave the following criteria for the recognition of these lesions:

1. P-R interval frequently, though not necessarily prolonged beyond 0.2 second.
  2. QRS interval exceeds 0.1 second and as a rule constitutes more than one-third of the entire complex.
  3. Relatively increased amplitude of initial deflections.
  4. Final deflection of T, usually in a direction opposite to that of the most prominent R deflection.
  5. Initial deflections almost always show notching in at least one lead, with many bizarre forms seen.
  6. Final deflection of T almost always exaggerated.
- In block involving the right branch, the initial deflection of the QRS syndrome is upward in lead one and downward in lead three. In lesions involving the left branch, the opposite holds true. The left branch is comparatively rarely involved.

Such changes in the ventricular complex are in general typical of these bundle branch lesions. Aberrant complexes of less amplitude are occasionally seen in left ventricular preponderance, where a greatly thickened muscle delays the transmission of the activation wave, giving an increased breadth between the limbs of the R deflection. Somewhat like abnormal QRS deflections are also noted in extra systoles which arise in the ventricles, and there are some which may be accounted for on a basis of a partial block of one of the bundle branches. This latter, however, does not refer to the so-called Arbo-

rization Block described by Oppenheimer and Rothschild, the existence of which is doubted by Wilson and Hermann, and by Smith. But the electrocardiographic findings in these abnormalities could in no way be confused with the typical QRS complex of a complete bundle-branch lesion.

In our series of thirty-five cases the age incidence was as follows: One in the eighth decade, three in the seventh decade, ten in the sixth, seven in the fifth, seven in the fourth, five in the third, and two in the second. The youngest patient was 24 years of age.

All showed dyspnoea in varying degrees. In every case which has come under our observation the dyspnoea has been a constant symptom and at times the only complaint. In ten cases the dyspnoea occurred during rest, and five showed orthopnoea. Fifteen showed a hypertension above 175. In twenty-nine absolute cardiac enlargement was noted. In six the enlargement was relative only. Twelve showed irregularities of various kinds. Murmurs were present in fourteen; in six of these the mitral valve was involved, in six the aortic, and two showed involvement of both valves. Edema was present at one time or another in only sixteen of this group. The urine showed evidence of varying grades of nephritis in twelve. Eight had pain in the cardiac region and referred areas suggestive of angina. There was noted a reduplication of the first heart sound in eight cases. Pulsus alternans was present in one. The blood Wassermann test was positive in six cases, the age incidence in these being 24, 32, 33, 35, 48, and 52. Six gave a history of having had repeated attacks of acute inflammatory rheumatism, and in ten there were definite evidences of focal infection.

The clinical course of these patients is most interesting. Twenty-eight have been followed; nineteen have died within an average period of ten and one-half months; nine are living, but have gained no relief from their untoward symptoms. One man has had six electrocardiograms at regular intervals during the past two years, and the findings have remained unchanged. One patient is living and in fair condition thirteen years after the lesion was first discovered in Bad Nauheim. The electrocardiographic findings in all showed the characteristic aberrant QRS syndrome. The ventricular phases were broad at their base, and for the most part showed a slurring or notching near or at the crest. The duration of QRS in all exceeded 0.1 second, and in some was almost 0.15 seconds. The T waves were in the opposite direction to that of the most pronounced ventricular deflection in thirty-two of the thirty-five cases. The most prominent of the ventricular deflections showed notching in thirty-three cases. The right bundle branch was involved in thirty cases, the left in five. There was an increase in the P-R interval in but two cases. Auricular fibrillation was present in two cases; extra ventricular systoles in seven.

A most interesting and striking feature in our series was the fact that eight cases showed absolutely negative physical findings, with the only complaint and subjective symptom, that of dyspnoea. One patient was operated upon and died four days



later of cardiac failure. We advise strongly against operation in all cases presenting this lesion in the electrocardiogram.

Herrick and Smith, in 1922, reported their clinical observations on a series of thirty-five cases in which the probable diagnosis of bundle-branch block was made from the electrocardiogram. Their notes very closely approximate our findings.

These lesions of the myocardium, involving one of the main branches of the bundle of His, are extremely important from the standpoint of prognosis. The mortality is very high in all reported series of cases. Willius states the death rate is approximately 70 per cent within a period of three years from the discovery of the lesion. Sudden death is not uncommon. It is hoped that further clinical experience will give more data on which we can at least base a probable diagnosis. It is unfortunate that the electrocardiograph is the only means of definitely showing this pathology *intra vitam*. However, with the increasing use of this instrument, more cases will be brought to light and further associated clinical evidence enhance our existing knowledge of this most interesting condition.

#### DISCUSSION

GEORGE DOCK, M. D. (Security Building, Pasadena)—Those who still believe that the string galvanometer is of use only for experimental purposes will be much interested in the practical paper of Doctor Granger. His observations are quite in line with those of others in different parts of the world, and show that in a class of cases not entirely rare an accurate diagnosis can be made by the study of electrocardiograms. Judging from experience with other cardiac anomalies, there is reason to think that those who study patients with the aid of the galvanometer will be able to recognize bundle-branch block with considerable accuracy by the clinical examination. By the wider use of apparatus and the installation of a string galvanometer in every hospital, the use of the method will be widely available.

GORDON E. HEIN, M. D. (University of California, San Francisco)—Distortions of the primary ventricular complex are of great interest and their recognition of definite help in prognosis. Classifying these deformities as to the part of the ventricular conducting system involved is sometimes difficult. As is emphasized in Doctor Granger's series, the length of life of patients showing this electrocardiographic picture is usually short. Of nineteen patients reported by Heard and myself in 1920, almost one-half were dead before four years had elapsed. Two patients were alive four years after the original electrocardiogram had been taken. The average age of our patients was 57 years, and most of them showed evidence of disease of the cardiovascular renal system. In most instances there was sufficient clinical evidence to enable one to make a diagnosis of serious cardiac disease, but we also had exceptions to this rule, and these exceptions emphasize the need of more frequent recourse to the electrocardiogram. A curious phenomenon noted by us was the persistence of a given form of deformity for a period of years.

HOWARD F. WEST, M. D. (1032 West Eighteenth Street, Los Angeles)—Doctor Granger has shown that but one symptom—dyspnoea—was a constant finding among the patients in his series, and that physical findings of organic cardiac disease occurred with much less constancy and consistency. These facts, associated with the serious prognostic importance of this type of electrocardiogram, offer the most important argument for a wider use of the string galvanometer. If more patients beyond the fourth decade contemplating surgical operations were studied by this method, much light would be thrown, I believe, upon the poor response many patients make to anesthesia and operative procedures. These

studies are of important clinical value, and should stimulate a wider use of the galvanometer.

JOHN J. SAMPSON, M. D. (University of California Hospital, San Francisco)—It is remarkable that a sign, namely, bundle-branch lesions, to which such serious prognostic import is given, should present the numerous exceptions as 30 per cent in Willius' series, 32 per cent in Granger's series, and 55 per cent in the cases followed at the University of California Hospital.

The value of the electrocardiogram in the discovery of suspected myocardial damage is not doubted. It is in such cases as the eight with dyspnoea alone that the electrocardiogram is of greatest value through its confirmatory evidence of questionable pathology.

The emphasis placed on any such particular sign as an absolute index of prognosis in heart disease seems an error. It is more rational to evaluate such definite evidence of cardiac damage as one would true angina or cardiac dyspnoea—naturally of serious import and a warning worthy of a regime guarding against heart strain, but in estimation of immediate prognosis, chiefly of importance in its association with other evidences of myocardial insufficiency.

Dyspnoea was uniformly present in Granger's series of cases, certainly a substantial clinical warning of possible myocardial damage.

It is interesting to note that in the University of California series, 87 per cent of those dying died within one year of the time of the discovery of the lesion; whereas, of those at present living with the lesion 80 per cent have had it for a period of over one year.

In agreement with Hein, I find that the diagnosis of the exact type of conduction system lesion is not simple, in that one or more of the criteria of Carter or Lewis frequently are ill-defined. The relatively high proportion of these borderline lesions is demonstrated in the 3550 electrocardiograms at the University of California Hospital. There were thirteen characteristic left bundle-branch blocks, sixty-six characteristic right bundle-branch blocks, whereas there were eighty-two atypical records.

### CLINICAL PICTURE OF BEGINNING CARCINOMA OF THE STOMACH

WITH ANIMADVERSIONS ON X-RAY ILLUSIONS  
IN GASTRO-INTESTINAL DISEASE

By HARRY I. WIEL \*

DISCUSSION by Harold Brunn, San Francisco, and G. Y. Rusk, San Francisco.

CANCER of the stomach, more than any other form of cancer, is characterized by the baffling feature of the absence of definite criteria by which it can be diagnosed in its infancy. The tragedy of the situation always has been that the earliest positive diagnosis has been arrived at when the lesion was so well established that a hopeless course has been inevitable. Our quest has been, not only some means of cure, but the discovery of manifestations that would enable us to recognize the disease in its incipency.

I have had one patient who was proved by surgical operation and histological findings to have carcinoma of the stomach actually in its very first stages. The uniqueness of this experience makes its reporting worth while. And without attempting to generalize from one experience, it may be profitable to attempt in this solitary instance to discover some sign or symptom which differentiated this earliest

\*Harry I. Wiel (490 Post Street, San Francisco). M. D. Johns Hopkins University. Practice limited to Internal Medicine. Appointments: Instructor in Medicine, University of California.



No. 2

Radiogram, taken three days later with patient thoroughly atropinized, showing same phenomenon.



No. 1

Radiogram, showing large pyloric defect and almost total absence of duodenum.

stage of cancer of the stomach from those usually seen.

#### CASE REPORT

This patient has been under my observation for thirteen years for whatever medical attention he has needed. He was a single man of 64 at the time his stomach disease developed. The family history records much arteriosclerosis, but the patient gave no evidences of it, in spite of his chronic gout, which he had had intermittently and severely for over twenty years. In his youth he had had several attacks of gonorrhea, but there was no history of lues, nor was a positive Wassermann ever obtained. In 1912, twelve years before the onset of the present illness, Hugh Young removed a benign papilloma from his bladder. Six years ago Harold Brunn operated upon him for a bursitis of the left subdeltoid bursa. Three years ago he was under the care of Walter Baldwin for an osteoperiostitis of the lower lumbar vertebrae and the greater trochanter of the right femur.

**Present Illness**—(This is purposely given in detail directly from my records.)—September 3, 1924. During the last three years the patient has been in good health, and there has been no occasion for me to see him professionally. About a year ago he noticed that if he ate freely of fruit he got "indigestion." He, therefore, abstained from fruit and was troubled no further. About six weeks ago he began to have pain under the lower portion of the "breast bone." He considered this due to indigestion. He decided that these "gas pains" were more a sense of pressure than anything else, combined with a sense of tightness. This pain has persisted, sometimes being distressing, and radiates to either side of the lower chest, but never to either arm. He has also had considerable pain across the shoulders, but he does not connect this with the pain across the front. With these pains and discomforts is associated a desire to belch, and if he succeeds in belching the pain is relieved. Five nights ago he had a sudden attack of pain, and for the first time it was associated with vomiting. Vomiting gave some relief, but he noticed that the vomitus contained stuff that looked like coffee-grounds. Has noticed no black or tarry stools. He has lost ten pounds in two months, but more than that notices a most alarming loss of strength and "pep." No shortness of breath nor swelling of the feet.

**Status**—The patient is strikingly cachectic in marked contrast to his usual look. However, his mucous membranes are not anemic. Pupils normal. No abnormal lymphatic nodular enlargements, and particularly no Virchow nodule is made out. Lungs normal. Heart normal

size. Sounds are all of good quality. Over the aortic region is a slight systolic murmur, probably an aortitis. Pulse not noteworthy. Abdomen full, but decidedly not so full as it has been in the past. He has always been pot-bellied, but now the "pot" is gone. The right upper quadrant is definitely tighter than elsewhere, and there is some tenderness here, but no definite mass is made out. Reflexes normal. Urine normal. Stool strongly positive for occult blood (meat-free diet), and this finding was constant on the many occasions the stool was examined. Blood count normal (red blood corpuscles, 4,850,000; Hemoglobin, 95 per cent). Gastro-intestinal x-ray studies, made two days later, showed a large lesion of the antrum, just inside the pylorus. This involved the entire distal third of the stomach. To exclude spasm, the patient was thoroughly atropinized for three days, and the x-ray was then repeated. Findings were the same.

A. W. Hewlett and Harold Brunn agreed with me that the patient had definitely a cancer of the stomach, and that the lesion, judging from the x-ray findings, was probably of such an extent as to make it inoperable. Nevertheless, operation was decided upon on the chance that conditions might not be found so untoward, and at any rate to do a gastro-enterostomy to forestall a possible oncoming obstruction—in other words, a palliative measure.

Two days after the last radiograms Brunn did a laparotomy. The upper abdomen showed very few adhesions, and no tumor mass was visible. Just inside the pylorus, however, could be felt a small, hard tumor about 9 mm. in diameter, which was resected with the entire pylorus. The stomach was closed and a gastro-enterostomy done. One very small mesenteric gland was made out in exploring the abdomen. This gland was excised, and under the microscope showed nothing but inflammatory tissue. The tumor, as you can see by the illustration, was a typical adeno-carcinoma, with the carcinoma cells going no further than the mucous lining of the stomach.

Glanville Rusk, pathologist, assured me that he had never seen or heard of a cancer of the stomach in so early a stage and still strictly limited to the mucous layer. It must have been in its very beginning. At the time of this writing (May, 1925), it is now nine months since the operation and the patient is normal in every way as far as we can discover.

Now, what is there about this case which is so definitely a beginning cancer of the stomach which distinguishes it from other cancers of the stomach? The sad answer is, nothing. The history is typi-





No. 3

Microscopical appearance of tumor, showing carcinoma strictly limited to mucous membrane.

cally that of the usual patient we meet, and if one can judge at all from this patient, one would have to say that the clinical picture of beginning carcinoma of the stomach is the same as in the more advanced stage of the disease.

More disappointing than that, however, is the manner in which the x-ray findings failed us. Too often we are prone to regard the x-ray findings as matters positive beyond dispute, especially when taken in connection with the clinical and laboratory examinations. I maintain that we are entirely too smug in our acceptance of radiological dicta, and I think I am safe in speaking for the radiologists themselves in this matter. There are still unexplored fields in interpretations of x-ray photographs. I should not attempt an explanation of the paradoxical x-ray findings in this case, but it has fixed me in the attitude that in radiology, at any rate, one cannot always believe one's own eyes.

This attitude had been started by previous experiences of a similar nature, which are here summarized:

A man, age 52, with symptoms and clinical findings of duodenal ulcer. X-ray findings: "Duodenal cap of small size, hazy in outline, with an irregular filling defect on the medial surface. Conclusion: Duodenal ulcer." X-ray findings three years later: "Duodenal cap shows persistent contraction in the middle third; is never well outlined. Conclusion: Duodenal ulcer."

On the strength of the increase in symptoms (following medical treatment they cleared up temporarily) and the constancy of the x-ray findings after three years the patient was operated upon. At operation a small whitish scar was discovered just at the duodenal side of the pyloric ring. This was not definite enough to be able to say surely that it was the scar of an old ulcer. One could say, with certainty, that it could not possibly have given the duodenal deformity seen in the radiogram. The duodenum itself was easily mobilized and nowhere had adhesions. The gall-bladder was normal and

free from adhesions. The patient's post-operative course was completely satisfactory, and he has had no return of his symptom. It should be added that when the duodenum was opened at operation a very small red area was found on its posterior surface. Harold Brunn, who operated, could not be certain that this was not traumatic. This area was excised (it was about 2 mm. in diameter) and Rusk reported that under the microscope it showed a sub-acute duodenitis.

When all is said and done it is perfectly apparent that this report has been iconoclastic in the extreme. All I seem to have accomplished is to add to my despair and perhaps to detract from the faith in an instrument that is so valuable, but which still needs improvement. Nevertheless, one very strong ray of light shines brightly through the gloom. This patient was actually cured by surgery of a disease which has been hitherto tacitly accepted as hopeless, and this one experience may help us feel certain that cancer of the stomach found in its very beginning is curable. Then remains the problem how to find it in its infancy, and that problem those who come after us may solve.

#### DISCUSSION

HAROLD BRUNN, M.D. (Fitzhugh Building, San Francisco)—The case recorded by Wiel is of considerable interest, especially from the standpoint of early diagnosis and operation for cancer of the stomach. It seems remarkable that in the numerous fluoroscopic and x-ray examinations made of the gastro-intestinal tract that we do not more often come across by chance an early, perhaps unsuspected, carcinoma of the stomach. I have never, however, been so fortunate.

The following case illustrates the earliest case that I have been my good fortune to operate upon, but here there were definite stomach symptoms which demanded examination. Before operation, because of the large defect at the pylorus, we felt that the case would probably be inoperable, as is so often our experience. However, on exposing the stomach we found a mass at the pyloric orifice which was very difficult to diagnose by palpation. There was no dimpling of the serosa. The mass seemed to be, in the mucosa, rather soft in consistency, and we thought it very likely to be polypoid in nature. Because of our indecision as to the nature of the growth, we first made a transverse incision across the pylorus to expose it. There then appeared a mass about the size of a hazelnut that did not seem to be definitely infiltrating. The opening of the stomach was closed, and then a resection of the stomach was made quite wide of the growth. In doing this a single gland was found near the head of the pancreas which we thought was probably carcinomatous, but proved on microscopic examination to be entirely free of any cancer cells. We have, therefore, in this case a reasonable hope that recurrence will not take place.

Dr. Wiel I feel, however, is too optimistic after nine months' apparent cure to prognosticate the future of his case.

GLANVILLE Y. RUSK, M.D. (University of California Hospital, San Francisco)—In regard to the remarkable case of carcinoma which Wiel is reporting, I might add that, from a pathological point of view, I hardly consider that the term adenocarcinoma adequately describes the lesion found. It is of colloid carcinoma type, and the degree of desmoplastic reaction is also striking. Whether this differentiation in type is of significance in relation to the interesting x-ray findings or not is for further observations to determine.

DOCTOR WIEL (closing)—Dr. Brunn seems to have been misled as to the degree of confidence with which I have prognosticated the future of this patient. I should like to add, however, that at the date of this note (January 18, 1926), sixteen months after the operation, the patient remains free from symptoms, and his physical examination reveals nothing to indicate a recurrence.

## SOME OF THE FUNCTIONS OF HUMIDITY

By DEAN BLAKE \*

*A thorough understanding of humidity is vital to public health, and its study should be removed from the physicist's laboratory and placed where its many branches and ramifications can be approached, not only by the theorist, but by the practical man as well.*

DISCUSSION by Paul M. Carrington, San Diego; F. W. F. Wieber, San Diego; William C. Hassler, San Francisco; Walter M. Dickie, State Board of Health.

IT HAS been repeatedly brought to my attention that many points about humidity are very little understood, and concerning which many mis-statements and wrong conceptions have been advanced, not only by the general public, but by physicians as well. The idea that the thermometer alone registers the heat and cold experienced by the human body is entirely too prevalent, judging by the opinions of health seekers who examine data in the weather bureau offices. Other climatic elements, such as wind movement, rate of evaporation, and the amount of water vapor in the air also affect our bodily sensations of heat and cold. Severe cold, for instance, becomes unendurable when accompanied by wind, and calm weather with a hot, muggy atmosphere is also productive of great discomfort, and even fatalities.

By humidity is meant the amount of water vapor present in the air, and it is recorded as absolute and relative. Absolute humidity is defined as the actual amount of moisture in a given quantity of air, expressed in grains per cubic foot, or grams per cubic meter, but is little used in statistics in this country. Relative humidity, on the other hand, is the relation of the amount of moisture present to the amount necessary for saturation at the same temperature. As an illustration, when the relative humidity is 50 per cent, then half as much moisture is present in the air as would be necessary for saturation under existing barometric and thermometric conditions.

Naturally, marine locations have a higher absolute humidity than continental climates, as the air is charged with water vapor to a greater degree, owing to the proximity of the ocean. But this is not necessarily true of the relative humidity. The capacity of air for moisture increases rapidly with addition of heat, and the relative humidity, therefore, changes with change in temperature. A warm oceanic district may have a smaller mean relative humidity than a cold interior, and at the same time have a greater absolute mean. This may be further explained by taking a mass of saturated air at a temperature of 32 degrees. Its relative humidity would be 100 per cent. However, if its temperature should suddenly be increased to 51 degrees, without change in other elements, the relative humidity would become 50 per cent, but the absolute would remain the same, regardless of temperature.

An interesting anomaly that perhaps needs a brief explanation is that humidity may keep us warm or

cool, depending upon the temperature of the air which contains the water vapor. Moist air has a greater capacity for heat than dry air, providing the temperature is the same. At temperatures around the freezing point, or 32 F., moist air "feels" colder than dry air, because under these conditions it takes away heat from the skin faster, leaving the skin colder. When the temperature is higher, the heat is kept in the body by the humid air because, owing to poor conduction and radiation, evaporation is hindered and heat loss is prevented.

The physiological effects are too many and too well known to enumerate here, but most writers agree that damp air induces nervous depression, slower blood circulation and quiet sleep, while dry air acts as a nervous excitant and causes sleeplessness and restlessness.

One of the engaging problems of the day is the humidifying of the heat in our public buildings and dwelling places, which, under the prevailing system of heating, are drier than the Sahara desert. Another problem of more recent advocacy is the movement of air in our rooms, not only during the heat of summer, but also in the winter. To insure a minimum amount of affections of the throat and nose, and consequently the respiratory organs, these problems should be studied by the physician, the architect, the contractor, the builder, and the meteorologist. A thorough understanding of humidity is vital to public health, and its study should be removed from the physicist's laboratory and placed where its many branches and ramifications can be approached, not only by the theorist, but by the practical man as well.

### DISCUSSION

P. M. CARRINGTON, M. D. (Watts Building, San Diego)—Humidity in its effects on the human organism must be considered in connection with the other elements or factors which enter into the composite whole constituting weather or climate. Again, the effects of humidity must be viewed in the light of man's power of adjustment or accommodation to his environment.

Air movement, and temperature, are potent factors in modifying the effects of humidity; still, hot days with high relative humidity give us the sun-stroke column in the daily paper of the Eastern cities. A moist atmosphere does, as stated by Mr. Blake, act as a nervous sedative, while excessive dryness is a decided excitant to the nervous system, but again the question of altitude, temperature and air movement comes in to intensify the effects of the condition of the air with relation to water content. Sudden changes in humidity act profoundly on many individuals, hence the importance considering this element in systems of heating of buildings.

This is my conclusion of the whole matter: moderate humidity with gentle air movement and mild temperature are wholesome conditions and make for comfort and health during all hours, whether of labor, refreshment or sleep.

F. W. F. WIEBER, M. D. (United States Navy, retired, San Diego)—The underlying physical facts in relation to the humidity of the air, both absolute and relative, have been clearly set forth in the article by Mr. Dean Blake. The physiological facts can be stated as follows:

Generally speaking, cold air as well as dry air, are stimulating. They act as a tonic, stimulate metabolism. Warm air, as well as moist, depresses and retards metabolism.

As temperature and humidity increase, depression increases.

With a wet bulb temperature of 85 degrees, the body temperature begins to rise, owing to diminished heat loss,

\*Dean Blake (Weather Bureau Office, San Diego, California). Appointments: Meteorologist in charge of the Weather Bureau office at San Diego; Instructor in Meteorology at the State Teacher's College at San Diego.



even though the body be at rest. Progressive increase of temperature and humidity will result in heat stroke at a temperature far below that which can be borne readily if the relative humidity be low, due to the stoppage of heat radiation.

A temperature of 62 to 65 degrees is more comfortable for rooms in which the absolute humidity is 70 degrees. With the relative humidity below this figure, a higher temperature is necessary because of the rapid evaporation from the body surface and the consequent sense of chilling. This evaporation decreases as the air approaches saturation, hence a lower temperature is required for comfort.

The relative humidity of the air for comfort should be about 70 degrees.

WILLIAM C. HASSLER (Department Public Health, San Francisco)—Dean Blake's address is a timely, succinct, presentation of a very important factor in preventive medicine. The relation of humidity in the atmosphere to comfort, to health, and to the efficiency of the workman is a very large and important subject on which, up to the present time, there has been considerable difference of opinion. In spite of this difference, certain physiological facts seem to have been proven, namely:

(a) That low humidities are uncomfortable unless accompanied by high temperatures.

(b) Low humidities are accompanied with increased amounts of dust in the air, which, together with the physiological effects of increased function of glands and membranes, create a condition that inflames or irritates the mucous surface of the respiratory tract and renders them susceptible to invasion of the specific micro-organisms of disease, and secondarily it causes an irritation of the nervous system through the excessive dryness of the skin, due to increased evaporation, all of which produces a nervous tension and a debility even in healthy persons.

We have yet to determine definitely what is the effect of humidity on the human body. Is it the absolute or the relative humidity that affects our sensibilities and our health? Or is the wet bulb temperature the all-important factor? Is a constant humidity on a fixed scale necessary or desirable throughout the year, and is it at all desirable to provide artificial humidity?

Every physician realizes that normal body heat must be dissipated, and the proper regulating of this heat loss is one of the most important elements in producing body comfort and health.

I concur with Dean Blake that the great majority of doctors have relegated to the engineer, the architect or the builder the determination of this important adjunct to health for the occupant of the home, the school, the workshop, playhouse, or office building, whereas it should be a joint responsibility. It is only in recent years, and through the efforts of the National Anti-Tuberculosis movement, that any progress in education of the public and the medical fraternity has been really made.

Dr. Henry Mitchell Smith in his paper, "Indoor Humidity," read before the Brooklyn Medical Society, says: "The overheating of our houses has been accepted as a prominent cause of catarrh, but I am confident that the low relative humidity, and consequently large saturation deficit . . . in our rooms in winter, is much more important than the overheating, and doubt the so-called damp climate of the sea coast or the shores of large inland lakes is in itself responsible for the diseases charged to these localities, but believe it is much more likely due to the great contrast between the indoor and the outdoor relative humidity of those regions."

Additional study and further proofs on the comparative effects of claimants that low humidities and accompanying high temperatures are preferable to higher humidities and lower temperatures is desirable to settle the difference of opinion and determine within closer limits the relation of the humidity to the temperature, under comparative conditions, that is best suited to the greatest number and prevent the pathological changes above mentioned. Preventive medicine is especially interested in this question, particularly in times of epidemic of the respiratory diseases.

Further studies along this line may also develop the reason for our seasonal increase of the pneumonias, etc. Our ever-changing conditions of living, especially in

cities with their overcrowding and attempt to heat rooms with gas radiators or gas plates, more often with no outlet to carry off the products of combustion, and no means of determining the relative humidity, is one of the main factors in lowering resistance to the pathogens of disease.

WALTER M. DICKIE, M. D. (State Board of Health)—Relative humidity is important in determining the comfort and general health of the human being. Great extremes in humidity and dryness are productive of discomfort. We know that moderate temperature, moderate humidity and gentle motion of the air make for the greatest comfort, but continued uniformity in climate may become monotonous. Occasional storms and climatic changes, if not too abrupt, provide a necessary variation that is stimulating and of great importance in the maintenance of health. Temperature and humidity are not the only factors that make climate, however. Sunshine, for example, must be included in any discussion concerning climate and health. The importance of sunshine has been recognized for many years, but we are only beginning to learn of the effects of the particular rays in the maintenance of health. All of the many factors that enter into the make-up of weather and climate should be considered together.

Nearly all of the respiratory infections are more prevalent during the winter months. The relative absence of sunshine during this period of the year may have something to do with this increased prevalence. It is probable, however, that body fatigue induced by faulty metabolism, faulty elimination, and the consequent lowered individual resistance incidental to indoor winter life, have much to do with the contraction of the respiratory infections. Crowding and close personal association that always accompany indoor life when cold weather exists favor the spread of these contact infections.

Too often, responsibility for the spread of respiratory infections is placed upon low temperature and extremes in humidity alone. These are to blame only insofar as they apply to the production of body fatigue. The natural adaptability of the human being to great changes in climate is remarkable. The application of the simple rules of personal hygiene, including "dressing for the weather," supplements this natural adaptability and provides an important factor in preventing the body fatigue of winter. It is true that most of our homes, offices, and factories are overheated during the winter season, rendering the individual unfit to accommodate his body mechanism to the rigor of the cold outside air. The proper use of the open window, the best ventilating device that has as yet been made available, can do much to overcome this defect.

Climatology, with relation to health, has not as yet acquired the status of an exact science. In reality, there is little knowledge that has been contributed to this subject. It would seem that temperature alone may be a factor in determining the prevalence of some diseases; in others, humidity, sunshine, and air movement may play important roles, and in other diseases various combinations of these factors must be considered. Each and all of them, or any of them in combination with each other, may even constitute determining factors in susceptibility, resistance, and immunity to disease. Surely, there can be no wider field of research open to diligent workers than the study of climatology with relation to man's health.

DEAN BLAKE (closing)—The discussion of the few notes on humidity has been of considerable interest to me, and as it seems to have been centered more around the physiological effects than any other factor, I beg permission to append a few paragraphs.

The problem of expressing weather in terms of a scale of human comfort is one that is engaging doctors and meteorologists alike, and many attempts are being made to classify weather observations according to their effects on the body. In fact, a mathematical formula is being sought.

So far the most complete study in print is Dr. Leonard Hill's "The Science of Ventilation and Open-air Treatment," published by the Medical Research Committee, London, 1919-1920. The rate at which our bodies cool under various weather conditions is discussed fully,

Dr. Hill obtaining his values from the katathermometer, a wet and dry bulb thermometer of his own invention. Several important papers bearing on the subject have also recently appeared in the October, 1925, number of the "Monthly Weather Review."

The importance of atmospheric moisture in its relation to plant and animal life has been fully recognized. Ravenstein, in his well-known climatic classification, for one, has subdivided the earth into sixteen hygrothermal climatic types, the grouping being based upon certain relations between temperature and relative humidity. Perhaps too much stress is laid by investigators on its importance, but the fact remains that the physical and mental differences of certain African races, alike in other particulars, can be traced definitely to the effects of dry and moist climates.

I think it unquestioned that the stimulus of seasonal changes in weather found in the temperate zones contribute much to man's highest development, and that the monotonous, moist heat of the tropics is fatal to ambition and progress. It has been said that there are no fourth generations of Anglo-Saxons in India! There seems to be some question, though, as to the value of continuous or nearly continuous sunshine, some claiming that localities with "filtered sunshine" produce greater efficiency and are more nearly "ideal" than those where cloudiness is not so prevalent.

In late years attempts have been made to correlate the prevalence of large high barometer areas with certain epidemics, such as influenza, but a segregation from the mass of other influences of the effects of pressure alone has not been carried out to a great degree of satisfaction.

I heartily agree with Dr. Dickie that there are few more inviting fields for research than those of the effect of climate and weather on health, but so many inter-related factors enter into the subject, such as environment, heredity, customs, diet, clothing, etc., that trustworthy conclusions can be arrived at only after a most painstaking investigation.

Under present conditions doctors should be more patriotic than partisan at elections. Self-preservation is one of the first laws of nature. Medical men must stand together. The organized profession must have a clear-cut platform on things medical, and must not hesitate to back it whether or not it is palatable to either of the old parties and their candidates. In the new order of things there is no longer to be considered the party brand. The slogan for the future should be: "Does the candidate stand for radical medical legislation, which is always un-American, destructive alike to the interests of the people and the profession." The welfare of the profession and the masses of our people is knitted and woven into the fabric of the campaign against bolshevism and destructive foreign propaganda financed and fostered by agents of destruction. The ideals for which we strive are always in the interests of the public and are not impossible of accomplishment, if we will wage a constructive fight against the election of any candidate for the legislature or for other office who is in sympathy with un-American propaganda. Whether one is a Democrat or a Republican makes no difference in local government. He can join in the saving of the government without abandoning his political party. What we need now is political leaders who will not show cowardice in evading issues involving the safety of our government because they antagonize aggressive minority organizations. Loyalty to the best interests of all the people must be above and beyond that of any civil or industrial organization working for the interests of special groups or classes.—Illinois Medical Journal.

The consistent anti-scientist is quite right in refusing the authority of science in matters of faith. He is obviously wrong in refusing the testimony of science where facts will tell the story, unless he is willing to throw over all science, and discard his radio, his electricity, his antitoxin, and his automobile. If we are going to be cowards in our books, we shall be used as cowards deserve, and our trimming in the long run will cost us heavily in cold cash as well as in the advance of civilization.—Saturday Review of Literature, March 27, 1926.

## VINCENT'S ANGINA

### THE SIGNIFICANCE OF FUSIFORM BACILLI AND SPIRILLA IN MUCOUS MEMBRANE LESIONS

By HIRAM E. MILLER AND NORMAN EPSTEIN \*

(From the Department of Dermatology, University of California Medical School)

*Fusiform bacilli and spirilla are normal inhabitants of the mouth and external genitalia. They often secondarily invade pathological processes in these locations, and give a smear picture somewhat similar to that seen in Vincent's angina. A smear from a case of Vincent's angina shows large numbers of spirilla of somewhat uniform size and shape, many fusiform bacilli, and a few other organisms. A smear from some other pathological condition in the mouth may show many spirilla of varying size and shape, some fusiform bacilli and many cocci, diphtheroids, etc. Vincent's angina is never a bullous disease, is seldom localized in one or two areas, and to the best of our knowledge has never been the cause of a skin eruption. The local application of neoparsphenamine has been the most useful therapeutic agent in our hands.*

DISCUSSION by Rea E. Ashley, San Francisco; J. Edward Harbinson, Woodland; Ernest Dwight Chipman, San Francisco; Irwin C. Sutton, Hollywood.

**P**ATHOLOGICAL changes in the mucous membranes of the mouth are often difficult to classify. Some evidence of systemic disease, a co-existing skin eruption, or a history of medication may be of definite aid. When these are absent the possibilities are manifold.

During the World War some of us saw epidemics of Vincent's angina. Much was written concerning them, and physicians were led to believe that this was a disease of common occurrence. It was taught that if the microscopical examination of a smear from an ulcerative mucous membrane lesion revealed the presence of fusiform bacilli and spirilla a positive diagnosis of Vincent's angina could be made. In this paper we wish to emphasize the normal habitat of these organisms, and to mention the pitfalls that one may encounter if they do not correlate the microscopical findings with the clinical aspect of the disease.

### THE NORMAL HABITAT OF FUSIFORM BACILLI AND SPIRILLA

The association of the fusiform bacillus and spirilla in the human body has been noted by many observers in connection with both normal and diseased conditions. In fact, the very first organisms seen under the microscope were these spirilla from the tartar of the teeth described by Leeuwenhoek in 1683.

These organisms occur normally in great numbers about the teeth, in the crypts of the tonsils, and in the adenoids. Campbell and Dyas report that 50 per cent of all swabs taken from the mouths of

\*Hiram E. Miller (384 Post Street, San Francisco). M. D. University of California, 1917. Practice limited to Dermatology and Syphilis. Hospital connections: University, San Francisco, St. Luke's, Hahnemann, and Southern Pacific hospitals. Appointments: Assistant Clinical Professor of Dermatology, University of California Medical School.

Norman N. Epstein (1507 Anza Street, San Francisco). M. D. University of California. Practice limited to Dermatology. Appointments: Assistant in Dermatology, University of California Hospital. At present on leave, serving as Demonstrator in Dermatology, Western Reserve School of Medicine. Publications: "The Rose Bengal Test for Liver Function" (Arch. Int. Med., December, 1924); "The Rose Bengal Test for Liver Function" (Journal American Medical Association, September, 1925).





normal troops showed a few Vincent's organisms. Pilot and Brams report that 82 per cent of one hundred pairs of excised tonsils showed numerous fusiform bacilli in the crypts, while 25 per cent showed spirilla, and 32 per cent of adenoids showed fusiform bacilli, while 4 per cent showed spirilla.

A study of smears from about the gums of 160 of our clinic patients with apparently normal mouths showed:

	Very Numerous	Numerous	Few	Absent
Spirilla .....	16 (10%)	40 (25%)	67 (42%)	31 (23%)
B. fusiform .....	12 (7%)	65 (41%)	71 (44%)	12 (7%)
Cocci:				
Staph.				
Strept. ....	41 (25%)		119 (75%)	0

From the above table it can be seen that spirilla were found in 77 per cent of the cases, and the B. fusiformis was present in 92.5 per cent of them. Cocci were present in every case.

The smears in this series were prepared by rubbing a cotton swab about the gums and teeth and then spreading this material over a slide. The slide was air-dried and stained for 30 seconds with Sterling gentian violet. Examination of most of these smears showed spirilla which varied in length, and in the number and size of the curvatures. The organisms were not very numerous, but they could be demonstrated in most of the fields. The fusiform bacilli were always present when spirilla were found, but several slides showed B. fusiformis in moderate numbers, with no demonstrable spirilla. Cocci were always present, and usually in great numbers. There did not seem to be any definite relation between the number of cocci and the number of Vincent's organisms. Some slides showed many spirilla and fusiform bacilli with a few cocci, and others showed great numbers of cocci with a few Vincent's organisms. Of the sixteen cases which showed many spirilla, the smears closely simulated those of Vincent's angina.

The B. fusiformis and spirilla are frequently found in the smegma about the genitalia of the male and female. They have been found in abundance in 51 per cent of uncircumcised males and about the clitoris in 60 per cent of women. They are not found in the normal vagina or uterus. They have been isolated from sloughing carcinomata of the

uterus, sloughing fibroids, tumors, and syphilitic lesions of the vulva.

Vincent reported several cases of gastro-enteritis, in which large numbers of spirilla and fusiform bacilli were found. The organisms have been reported in gangrenous appendices. They may also infect surgical wounds and give rise to gangrenous processes.

All of this would seem to indicate that the normal secretion about the mouth and genitalia harbor organisms that are identical with those that give rise to true Vincent's angina.

#### VINCENT'S ORGANISMS AS "OPPORTUNISTS"

The B. fusiformis and spirilla belong to the general type of bacteria known as "opportunists." When they cause infections they invariably do so in the locations in which they normally live. Any change in the resistance of the tissues about the mouth or genitalia may permit the bacillus fusiformis or spirilla to give rise to definite pathological processes. This chain of events undoubtedly takes place in some cases of: (1) Gangrene of the lung; (2) bronchiectasis; (3) lung abscess; (4) purulent otitis media; (5) noma.

From the focus about the external genitalia they may give rise to (1) erosive and gangrenous balanitis; (2) ulceration and necrosis of the labia.

In civil life we see very few cases of Vincent's angina. During the World War it was often epidemic. Some unknown factor may have increased the virulence of the organisms, which are usually saprophytic to such a point that they became definitely pathogenic. Certain authorities believe that the restricted diet and the unhygienic conditions under which the soldiers were forced to live may have played some part.

#### PATHOLOGICAL CONDITIONS IN WHICH THE B. FUSIFORMIS AND SPIROCHETE OF VIN- CENT ARE PRESENT, BUT PLAY NO ETIOLOGICAL ROLE

Bermerdoin reported that he found B. fusiformis and spirochete of Vincent in 64 per cent of 227 cases of diphtheria, in 73 per cent of scarlet fever cases, in 50 per cent of streptococcal sore throats, and in 67 per cent of 31 cases of syphilis of the mouth and throat.

We have noted their presence in pyorrhea alveolaris, in mercury and bismuth stomatitis, in carcinoma of the mouth and throat, in tuberculosis and syphilis of the mouth, in the stomatitis of acute leukemia and pellagra, in erythema multiforme, and in a case of an ulcerated birthmark in the mouth.

Obviously, in the above conditions these organisms are of no etiological importance. They occur in considerable numbers, but are generally in the minority in respect to other organisms noted on the slide. They maintain the same morphology as seen in Vincent's angina. There is very little uniformity in the smear pictures presented by any one of these conditions in different patients. We have studied this particularly in mercury stomatitis and in pyorrhea alveolaris. It was noted that successive cases of mercury stomatitis and pyorrhea alveolaris gave entirely different pictures on the slide, although,

clinically, the cases were very similar. In some cases the smear showed great numbers of spirilla and fusiform bacilli, while others showed very few. In every case there were many cocci, and in some the masses of staphylococcus and streptococcus completely obscured the spirilla and *B. fusiformis*. This lack of uniformity is in distinct contrast to the smears of true Vincent's angina, which consistently show a great preponderance of fusiform bacilli and spirilla.

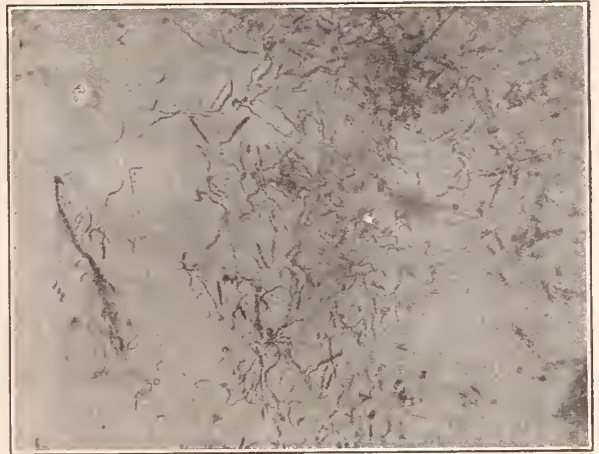
#### BACTERIOLOGY OF VINCENT'S ANGINA

In 1894 Plunt, and in 1896 Vincent, conclusively showed that Vincent's angina was caused by two micro-organisms, which were always found together, namely, the *B. fusiformis* and a spirillum. These organisms are present in great numbers in every case of Vincent's angina, but are never found in pure culture. There are always present various pyogenic cocci, diphtheroids, occasionally a leptothrix, and at times other organisms. It is believed by some observers that the fusiform bacillus and the spirillum are different stages in the life cycle of the same organism. Pure cultures of *B. fusiformis* have a very low grade of pathogenicity. Large doses injected into the pleural cavity of the rabbit causes little reaction. Pilot et al. showed that, in order to produce a putrid lesion, one of the pyogenic cocci had to be added to the injection. When death occurs in experimental animals that have been inoculated with Vincent's angina material, it has always been due to a streptococcal septicemia. The spirillum and fusiform bacillus are found only in a small localized area at the site of injection.

Smears from typical Vincent's angina vary according to the age of the lesions and the place from which they are taken. In general, older lesions show a preponderance of spirilla, while early lesions show a preponderance of bacilli. Campbell and Dyas, and Gifford showed that smears from the surface of the lesions contained many more bacilli than spirilla, while smears from the deeper parts of the lesions showed the reverse. The typical picture of Vincent's angina, as seen by gentian violet stain, shows that the fusiform bacillus and the spirilla greatly predominate. The spirilla may form interlacing masses with the fusiform bacilli entangled in their meshes. The spirilla are approximately uniform in size and curvature, but varying forms may be encountered. The fusiform bacilli vary somewhat in length, and may have blunt ends without the typical fusiform structure. Some of the bacilli may be curved. In addition to these organisms, but always in the minority, are staphylococcus, streptococcus, diphtheroids, leptothrix, and occasionally other organisms. The decision as to whether or not a smear represents true Vincent's angina depends on the actual number and uniformity of the *B. fusiformis* and spirilla present and their relationship to the number of other organisms seen. In Vincent's angina the fusiform bacilli and spirilla predominate.

#### CLINICAL PICTURE OF VINCENT'S ANGINA

Vincent's angina is essentially an acute and local disease. It usually begins as a stomatitis, pharyngitis or tonsillitis, in which there is a formation of



a pseudo-membrane similar to that seen in diphtheria. This loosely adherent grayish film may remain for some time or quickly separate, leaving a well-defined, somewhat punched-out ulceration similar to that seen in late syphilis. A very common place for the infection to begin is just behind the last molar. The disease does not remain localized in one or two areas for any period of time. Close examination will reveal superficial ulceration around many of the teeth margins, in which masses of spirilla and fusiform bacilli can be demonstrated. There are never any bullous lesions in true Vincent's angina. The disease does not cause much systemic disturbance except for an occasional fever of around 100 degrees. There is some local pain, but not as much as the amount of tissue destruction would indicate. There is very little regional adenopathy in an uncomplicated case. The Wassermann reaction is always negative.

#### DIFFERENTIAL DIAGNOSIS

Inasmuch as the *B. fusiformis* and spirillum can be demonstrated in practically every ulceration of the buccal mucous membrane, their mere presence or absence in a lesion cannot be taken as the basis for a differential diagnosis. The clinical differentiation of the following conditions from Vincent's angina is of the utmost importance:

1. *Syphilis*—A primary lesion is generally a solitary one and is accompanied by a rather marked regional adenopathy. If material for a dark field examination is taken from the depths of the lesion it is generally diagnostic. The mouth lesions of secondary syphilis are accompanied by other evidences of the disease. Tertiary lesions are essentially chronic and localized. A therapeutic test with mercury or iodide will make the diagnosis.

2. *Diphtheria*—The patient is generally quite sick. A culture will reveal the causative agent. It is often clinically difficult to differentiate atypical cases.

3. *Tonsillitis*—The condition is limited to the tonsils. Patient feels quite sick and has a relatively high fever.

4. *Mercury and Bismuth Stomatitis*—A history of medication, with one or the other of these drugs, will substantiate the diagnosis.

5. *Pyorrhea Alveolaris*—This is essentially a



chronic disease. It is always limited to the margins of the teeth, and is accompanied by little or no ulceration.

6. *Erythema Multiforme*—The lesions are bullae or ruptured bullae. They may be limited to the mouth. Vesicles or bullae never occur in Vincent's angina.

7. *Pellagra*—A stomatitis and gingivitis frequently occurs in this condition. Some other manifestation of the disease will suggest the diagnosis.

8. *Acute Leukemia*—We have recently seen three cases of acute leukemia that had been diagnosed as Vincent's angina. In this condition the hypertrophy of the gums may be so great that they overlap and almost completely cover the teeth. This hypertrophy is due to a leukemia infiltration and may be ulcerative. A differential blood count will make the diagnosis of leukemia.

#### SKIN ERUPTIONS ASSOCIATED WITH VINCENT'S ANGINA

The literature contains a few brief reports of skin eruptions, supposedly due to Vincent's angina. We have seen many patients with skin eruptions and associated mouth lesions that contained fusiform bacilli and spirilla. None of them, however, was Vincent's angina. Some were streptococcal sore throats, others were measles, pellagra, erythema multiforme, and syphilis.

Stern recently reported the existence of genital or mucous membrane lesions with regional adenopathy, with macular skin rashes and positive Wassermann reactions in which a fusiform bacillus and spirilla were found. The disease was not readily transferred from one individual to another; it cleared up under one arsphenamine injection and, in fact, in some cases without any treatment at all. Stern believes that the spirilla which he found were different from those found in Vincent's angina. In other words, the condition with which he was dealing was not Vincent's angina, but a spirillosis that he termed "parasyphilis," and was due to some unclassified organism. The term parasyphilis is ill-advised, as it is already in the literature as applying to tabes dorsalis and general paresis.

#### TREATMENT

Textbooks contain a list of many drugs that are said to be of value in the treatment of this disease. We have used many of the dyes, silver nitrate, Fowler's solution, mercurochrome, and the arsphenamines.

At present we use only neoarsphenamine because we have found that it is of more value than any of the other drugs. We apply it locally at 24-hour intervals. After opening an ampule of neoarsphenamine, we dip a swab into the powder and apply it to the involved areas. The moisture about the individual lesion causes the powder to go into solution. We always apply it to both tonsillar areas and around all teeth, whether there is any apparent involvement or not. We do not give it intravenously, because we have found that improvement is just as rapid by the local method. Furthermore, by this method we avoid the danger of clearing up an undiagnosed syphilitic lesion or of giving the patients

an arsphenamine dermatitis. We have seen both of these misfortunes occur.

#### SUMMARY

Fusiform bacilli and spirilla are normal inhabitants of the mouth and external genitalia. They often secondarily invade pathological processes in these locations, and give a smear picture somewhat similar to that seen in Vincent's angina. A smear from a case of Vincent's angina shows large numbers of spirilla of somewhat uniform size and shape, many fusiform bacilli, and a few other organisms. A smear from some other pathological condition in the mouth may show many spirilla of varying size and shape, some fusiform bacilli and many cocci, diphtheroids, etc. Vincent's angina is never a bullous disease, is seldom localized in one or two areas, and to the best of our knowledge has never been the cause of a skin eruption. The local application of neoarsphenamine has been the most useful therapeutic agent in our hands.

#### DISCUSSION

REA E. ASHLEY, M. D. (380 Post Street, San Francisco)—The subject of Vincent's angina has always interested me because a definite diagnosis can be made by a smear under the microscope and because the condition yields so readily to treatment.

The infection is comparatively rare, and yet the throat specialist sees several cases a year, and its importance should not be underestimated. Nearly all of my patients were students, nurses, and interns.

I have never recognized the infection in an otitis. Our routine, however, is to make cultures and not smears from such ears, and since the Vincent organisms are anaerobes it may have been overlooked.

My treatment is very similar to that of Miller and Epstein. I have the patient gargle with hydrogen peroxide prior to making the topical applications of arsphenamine. A prescription containing emetine, Fowler's solution, glycerine, and alcohol, to be used at home by the patient, has also proved of value.

I have treated only two patients by intravenous injections of neoarsphenamine. The first patient was a nurse whose mouth was so infected and the pain so great that local applications could not be made either with a swab or with a spray. Six-tenths neosalvarsan was given. The nurse was back on duty, and completely recovered in five days. The second case was much less severe and cleared up very quickly following one injection of neoarsphenamine.

Two or three patients did not clear up rapidly under the arsenic treatment, and since reading this paper I believe the reason was that they were not correctly diagnosed.

J. EDWARD HARBINSON, M. D. (Woodland Clinic, Woodland, California)—The statistics in this paper emphasize the very important fact, that of the presence of Vincent's organisms in the mouths of healthy individuals.

We are too prone to treat patients with throat and mouth infections as Vincent's Angina because we find the causative organisms of this disease in the smear made from the swabs of the lesions.

I have recently seen a case of chronic alcoholism, with pellagra and mouth lesions typical of Vincent's angina. Spirilla and fusiform bacilli were present in abundance on the smear. Arsphenamine powder was applied locally and neoarsphenamine given intravenously. There was very little improvement in the mouth lesions, and the patient subsequently died.

Pellagra had developed on the basis of malnutrition, as the patient practically lived on questionable whisky for a period of two months. The mouth lesions were probably due to the "opportunists" seizing the chance to become pathogenic when the general resistance became low.

Some of my patients, treated solely by local applica-

tions of arsphenamine powder, did not seem to improve until arsphenamine derivatives were given intravenously. The Wassermann tests in these patients were negative and the lesions were not suggestive of syphilis.

Besides neoarsphenamine intravenously I have used sulpharsphenamine with good results. Vincent's angina seems to come in waves. A busy physician may treat ten or fifteen patients during a week, and then several months may elapse before he sees another.

ERNEST DWIGHT CHIPMAN, M. D. (350 Post Street, San Francisco)—The contribution of Miller and Epstein is of value, because it gives essential details concerning conditions frequently ignored by dermatologic authors. The paper as a whole is admirable, and I believe the chapter on differential diagnosis might be added with advantage to any textbook of skin diseases.

IRWIN C. SUTTON, M. D. (Taft Building, Hollywood)—The authors have succeeded in clearing up most of the confusion regarding Vincent's angina, stomatitis, and gingivitis. One cannot help but feel that, in the presence of a metallic intoxication such as bismuth, the organisms cause destruction only because their environment has been changed. The local treatment is all important. I have never seen any benefit, aside from a general tonic action, follow the intravenous use of arsphenamine.

DOCTOR MILLER (closing)—I wish to thank those who have discussed this paper. Their remarks are greatly appreciated by the authors.

## BLOOD-STAINING OF THE CORNEA

By CHARLES MAGHY \*

IN THE September issue of the American Journal of Ophthalmology, 1919, I published the pathological findings from four cases of blood-staining of the cornea, from the pathological laboratory of the Royal London Ophthalmic Hospital. Since then I have observed three additional cases, and have been able to secure the eyes for pathological examination.

In my previous article I said blood-staining of the cornea was first described by Baumgarten in 1883. It is a discoloration of the stroma of the cornea, resulting from the presence of blood cells in the anterior chamber, which in the majority of cases results from an injury, with or without penetration of the globe, although it has been known to appear spontaneously after an intra-ocular hemorrhage in infantile glaucoma.

The time at which this phenomenon manifests itself clinically varies from a few days to a few months; its duration may extend over months, or even years.

The first patient was a man, 32, who had been struck in the left eye by a piece of steel. Examination a few hours after his injury showed a penetrating injury near the limbus, with the iris pro-

lapsed into the wound. The anterior chamber was full of blood. X-ray was negative. Vision equaled hand movements, with faulty projection. Tension—1. After three months the hyphema had disappeared, but there was a peculiar amber-colored discoloration which occupied the central portion of the cornea and measured about 7 mm. in diameter. The patient was kept under observation for several months. I was unable to discover deposits on Descemet's membrane, but a few pigment spots were present on the lens' capsule, with posterior synechiae. The eye was enucleated, on account of pain, January 20, 1919. Tension with a Schiotz tonometer, the day of enucleation, registered 60 mm. hg.

*Pathologic Findings—Macroscopic*—The globe measured 22 mm. from the center of the cornea to the optic nerve entrance. Fixation in 10 per cent formalin solution. Before section, the globe was frozen with ethyl chloride. Each hemisphere was examined with a Treacher Collins loupe.

The cornea showed the discoloration extended into its deeper layers. Lens and iris were against the cornea. Anterior chamber present at periphery only. Retina was completely detached. The parts were embedded in celloidin and stained with hematoxylin and eosin, Van Geissen and Mallory's stain.

*Microscopic*—The limbus cornea shows an area of round-cell infiltration. Many blood-vessels are distended with blood-cells. There is nothing pathological to be seen in the vessel walls, their endothelial lining is not thickened and stains quite uniformly. There is a cellular infiltration at the cross-section of the anterior ciliary vessels. The contour of the cornea is normal, except at one place, near its center, where there is a slight bulging forward. In over forty-five sections, the epithelium appears normal. The unevenness, present in Bowman's membrane, I ascribe to manipulation, as the globe was not wrinkled or noticeably shrunken before being embedded. In the stroma cornea, there were most interesting changes. Throughout this entire area, from the anterior elastic lamina to Descemet's membrane, are seen refractile bodies and blood-cells, in all stages of degeneration. Some of the cells, however, are clearly defined and take the stains uniformly, others are identified as blood-cells. The refractile bodies are rounded or oval, measuring 1.5 to 2 microns in diameter. Some are even smaller. They appear dark brown for the most part. Van Geissen's stain gives them an orange color. The situation of these refractile bodies seems to be always upon the stroma fibers or in the interlamellar spaces. Descemet's membrane is nowhere invaded by these small bodies or by blood-cells. The anterior chamber is uneven. Opposite the center of the cornea, the iris lies in contact with the endothelial layer. Much of the chamber is occupied with laminated connective tissue, in which are seen blood-vessels. The iris and ciliary body show atrophic changes. The former being markedly thinned as a whole. Some of the sections, however, show the iris to be broadened where it joins the posterior surface of the cornea. The chromatophors have lost much of their pigment, and red blood-cells are scattered about, with no signs of a vessel wall. The

\* Charles Maghy (1136 West Sixth Street, Los Angeles). M. D. University of Illinois. Practice limited to Ophthalmology. Senior House Surgeon and Pathologist, Moorfields' Eye Hospital, London, for four years; formerly Instructor in Ophthalmology, University of Illinois and University of California; Major, Royal Army Medical Corps, 1915-1916. Publications: "Observations on One Hundred Cases of Primary Glaucoma (Acute, Congestive, and Subacute) Under Treatment at Moorfields' Eye Hospital During the Past Four Years, With a Comparison of Visual Results" (Journal of Ophthalmology, Vol. XLIX, No. 4, 1920); "Bilateral Glioma of the Retina in a Girl Twenty Years of Age, in Which the Second Eye was Excised After an Interval of Nearly Eighteen Years" (British Journal of Ophthalmology, August, 1919); "Observations of Blood-Staining of the Cornea" (American Journal of Ophthalmology, Series 3, Vol. 2, No. 9, September, 1919); "An Anatomical Study of Eight Cases of Degeneration of the Cornea" (California and Western Medicine, 1921).



blood-vessels in this area are not distended with blood, showing that the process is not a recent one. There appears to be a marked emigration of cells from the vessels of the ciliary body toward the interior of the eye. The ciliary body and its processes show many evidences of atrophic changes. The optic nerve is cupped. The right eye was normal. Vision equaled 20/20 unaided; near vision equaled the finest type with a small plus correction.

The second patient was a man, 24 years of age, who was injured in a fight. The following day, examination showed no penetrating injury or abrasion of the left cornea. The anterior chamber, however, was full of blood. The vision was reduced to hand movements with faulty projection. The eye was not painful. Tension appeared normal to the fingers. In three months, the hyphema was absorbed, but the cornea showed a dark amber-colored discoloration. The patient complained of pain. Tension with a Schiotz tonometer registered 68 mm. hg. An iridectomy failed to reduce the tension for any length of time, and the eye was enucleated four months later.

*Pathologic Findings—Macroscopic*—Left eye measured 22.5 mm. antero-posteriorly. Fixation in 10 per cent formalin. Both hemispheres examined with a Collins' loupe. Cornea showed a brownish discoloration which extended into the deeper layers. Lens in place. Retina not detached. Embedded in celloidin. Stained with hematoxylin and eosin, Van Geissen and Mallory's stain.

*Microscopic*—The contour of the cornea appears normal. In all, forty-seven sections of the globe were stained. In none of these sections was the stroma free from blood-vessels. The epithelium and Bowman's membrane showed no pathological changes. The refractile bodies and blood-cells were everywhere present in the stroma, except near the limbus. Under the high power, the refractile bodies showed the same appearances as in the previous case, and occupied the same position, with reference to the corneal lamellae. The blood-cells are more easily identified than in Case 1. Descemet's membrane is free from these fine granules. There are many large deposits of calcified masses scattered throughout the stroma, beneath which are seen blood-vessels and free blood-cells in all stages of degeneration. The rest of the microscopical report does not interest us, so I will omit it, except to mention the nerve-head is deeply cupped. The right eye appears normal. Vision equaled 20/20 unaided.

My third patient was a man, 56, who gave a history of having injured his right eye when a boy, and several times since at rather long intervals. In his last injury he was struck in the right eye by a piece of plaster. Examination the day of his injury showed a central corneal leucoma, about 6 mm. in diameter. There was a small abrasion of the epithelium. The anterior chamber was about two-thirds full of blood. Vision equaled hand movements. Lens opaque. Tension with a Schiotz tonometer registered 48 mm. Eye never was painful until recently. Enucleation six months later.

*Pathologic Findings—Macroscopic*—Right eye measured 23 mm. antero-posteriorly. Fixation in 10 per cent formalin. Frozen with ethyl chloride before section. Collins' loupe showed a deep-amber

discoloration that extended into deeper corneal layers. Lens in place. Retina not detached. Embedded in celloidin and stained with hematoxylin and eosin, Van Geissen and Mallory's stain.

*Microscopic*—The contour of the cornea appears normal. The limbus cornea shows nothing pathological. In all, thirty-seven sections were examined—some consecutive, others, every fifth section. The epithelium appears normal, but is heaped up over the scar. Opposite the scar, Bowman's membrane is missing, as it is not regenerated. The stroma shows a scar that extends from the surface above to deep into the stroma. On both sides of the scar are seen degenerated blood-cells and refractile bodies. The refractile bodies are about 2 microns in diameter, on the average, and have an orange color, or appear dark brown. Some are dust-like in size. They lie in the interlamellar spaces. Descemet's membrane is not invaded. The nerve-head is cupped. I have purposely omitted the description of the rest of the globe. Left eye normal. Vision equaled 20/20 unaided, and the smallest type with a plus glass.

#### DISCUSSION

When one considers the number of patients with severe eye injuries seen in ophthalmic practice, blood-staining of the cornea is a comparatively rare condition. According to Romer, it occurred in one case out of four hundred eye injuries, at the Geissen Clinic. At the Royal London Ophthalmic Clinic, it has been observed in about the same proportion. At the Vienna Clinic, it has not been seen quite so often. Professor Fuchs states, regarding blood-staining of the cornea, that a peculiar sort of opacity and coloration (blood-staining) develops when the anterior chamber remains for some time filled with blood. Then the cornea, because it takes up the coloring matter of the blood, assumes an intense reddish, brownish, or brownish-green color, and at the same time becomes so opaque that the parts can no longer be distinguished through it.

It gradually clears again, beginning at the edge, but only in rare cases becomes once more perfectly transparent, and then only after months or years have elapsed. In that stage in which the central brown portion is surrounded by a narrow marginal zone which has regained its transparency, it looks as if a brown crystalline lens had prolapsed into the anterior chamber and was lying behind the cornea (Vossius, Treacher Collins). With the slit lamp, the staining appears to affect mainly the interlamellar spaces, in which the lamellae themselves, and along with the diffuse staining, granules and larger golden-yellow particles may be seen (Koepe). In most cases, the microscope shows in the lamellae of the cornea highly refractive granules looking like large coccior short rods, and giving the same color reactions as the erythrocytes. In some cases granules of hemosiderin are found.

It is only within recent years that the processes and lesions involved in the various bacteriological corneal conditions have been seriously considered in the light of comparative pathology, and as such divorced, for purposes of research from the dominance of clinical conceptions. In view of our increased knowledge of the structure of cells and the impulses, immediate and hereditary, which deter-

mine their performances, it seems possible now to resolve some of the complex processes and lesions embraced in the general notion of corneal inflammations into more simple factors and to arrive, if not at an exact understanding, at least at a reasonable conception of the relationship of their phenomena to each other and to those of normal physiology.

In a summary of the seven cases of blood-staining of the cornea which I have studied, the following questions arise. What are these refractile bodies? How do they gain access to the corneal stroma? Why are they present in one severe eye injury and absent in another? Why are they never found near the periphery of the cornea? Why do we get a complete disappearance of the refractile bodies and of discoloration in some cases?

The answer to these questions indicate much diversity of opinion among pathologists. Treacher Collins considers the discoloration due to fluid passing through Decemet's membrane by a process of diffusion and depositing hematin crystals in the corneal stroma, associated in some cases with hemosiderin. Weeks is of the opinion that the pigment enters the cornea through the spaces of Fontana in the soluble form of hemoglobin and is there transformed into a salt, insoluble in the fluids of the cornea. Vossius thought there was a direct hemorrhage into the substance of the cornea, the blood coming from the vessels at the limbus.

Baumgarten regarded the refractile bodies causing the discoloration as micro-organisms. Von Hippel and Leber, as fibrin coagula. Romer, as globulin masses.

I am of the opinion that the refractile bodies are pigment granules transformed from hemoglobin, and that they reach the cornea both by diffusion through Decemet's membrane and through the spaces of Fontana, although in a previous article I stated a contrary opinion.

The reason we find no refractile bodies or discoloration at the periphery of the cornea I ascribe to the following circulatory changes, due to the presence of a foreign body within the corneal stroma. It is a well-established fact that in injuries to a non-vascular tissue like the cornea, for example, the primary reaction to the damage, manifested by the fixed connective tissue cells, is often complicated by the wandering in of leucocytes from the conjunctival blood-vessels. This participation of distant blood-vessels and leucocytes is, no doubt, incited by a reflex stimulation of the nerves of the blood-vessels, and may be encouraged under certain conditions by the absorption of certain injurious substances which are carried to the nearest blood-vessels by the lymphatics. Thus it is, that in a condition of blood-staining of the cornea, just as in an injury to the cornea, the lesion becomes complicated by a secondary participation of adjacent blood-vessels and, depending upon the degree of this secondary participation of the adjacent blood-vessels, the circulation at the limbus may carry the degenerated blood-cells and refractive bodies in part, or entirely, into the circulation, leaving the cornea clear at the periphery or restoring it almost to its normal state.

## THYROIDITIS

By H. H. SEARLS AND E. I. BARTLETT \*

(From the Department of Surgery of the University of California Medical School)

*Acute thyroiditis is quite rare in this country, and is most commonly found as a sequel to tonsillitis, otitis media, scarlet fever, pneumonia, and typhoid.*

*Exophthalmic goiter may follow an acute thyroiditis, or, with extensive destruction of the gland, evidence of insufficiency may develop.*

*Under the heading of chronic thyroiditis, tuberculosis and lues must be given brief mention. Tuberculous thyroiditis is a common incident of military tuberculosis.*

*Syphilitic thyroiditis, always a rare disease, has under the rationale of modern anti-luetic treatment become an even less frequent finding.*

*A true chronic diffuse thyroiditis is very difficult of diagnosis. Thus, of seventeen such cases selected for their typical pathological picture from the files of the University of California Hospital, only three were correctly diagnosed pre-operatively, the condition in eight being called toxic adenomata, and in the remaining six, hyperplasia.*

*Because of this high percentage of error in diagnosis, a careful study of the case records of these patients has been made in an effort to determine any clinical points of differentiation which might aid in establishing, pre-operatively, the true nature of the pathological condition.*

*DISCUSSION by John Hunt Shephard, San Jose; Wallace I. Terry, San Francisco; C. L. Hoag, San Francisco; H. Lissner, San Francisco.*

**I**NFLAMMATIONS of the thyroid gland may be grouped into the acute, sub-acute, and chronic types. It is planned here, after a brief discussion of the other forms, to dilate at length on the chronic diffuse type.

Acute thyroiditis is quite rare in this country, and is most commonly found as a sequel to tonsillitis, otitis media, scarlet fever, pneumonia, and typhoid. The general picture is one of severe systemic reaction developing suddenly with chills, high fever, and prostration. Locally, the gland is enlarged, very firm, fixed, and quite tender. The reaction may remain localized in one lobe, or less commonly, involve the entire structure. The patient complains of severe pain, together with marked pressure on the trachea and esophagus. The process may go on to suppuration, requiring drainage, but more commonly subsides rather quickly under treatment. Exophthalmic goiter may follow an acute thyroiditis, or, with extensive destruction of the gland, evidence of insufficiency may develop. There is desquamation of the epithelium lining the acini, disappearance of colloid, and tremendous invasion of the in-

\* Henry Hunt Searls (Department of Surgery of the University of California Medical School). M. D. University of California. Practice limited to Surgery. Hospital connections: University of California Hospital. Appointments: Instructor in Surgery, University of California Medical School.

Edwin I. Bartlett (Medico-Dental Building, 490 Post Street, San Francisco). M. D. Johns Hopkins. Practice limited to Surgery and Surgical Diagnosis. Hospital connections: University of California Hospital, South San Francisco Hospital. Appointments: Assistant Clinical Professor of Surgery, University of California, and Surgical Pathologist University of California Hospital. Publications: "Chronic Lesions of the Lower Lip" (California State Journal of Medicine, October, 1921), "Clinically Doubtful Breast Tumors—Their Diagnosis and Treatment," Annals of Surgery (June, 1921), "A Tumor of the Scapula," "A Bone Cyst of the Humerus," "A Case of Clinically Doubtful Breast Tumor," "The Surgical Clinics of North America" (Vol. 2, No. 2), "Mesenteric Cysts," "Mikulicz's Disease," "The Surgical Clinics of North America" (Vol. 3, No. 3), "The Treatment of Blue Dome Cyst" (Journal A. M. A., August 2, 1924, Vol. 83, pp. 343-347), "Breast Hypertrophy—Non-surgical Breast Conditions" (Surgery, Gynecology and Obstetrics, June, 1924, pp. 798-805).



teracinar spaces by lymphocytes and polymorphonuclear leucocytes. There may be small hemorrhages. Thrombosed vessels are noted. The gland is congested and edematous.

Riedel, in 1896, first described a sub-acute inflammation of the thyroid coming on fairly rapidly, causing some pain and marked pressure, and chiefly characterized by an extreme degree of induration. Emphasizing this latter finding, Riedel named it "iron-hard strumitis." The French later applied to it the more commonly accepted term "ligenous thyroiditis." Because of its consistency and fixity to surrounding tissues, it is often pre-operatively diagnosed malignancy. The condition is characterized by a tremendous fibrosis, with absence of colloid and obliteration of the epithelial cells and acini of the gland. This rapidly forming fibrous tissue gives the extremely hard consistency to the tumor. As the new scar tissue develops in the isthmus of the thyroid, it contracts, pulling the two lateral lobes tightly against the trachea, resulting in an alarming sensation of choking. Section of the isthmus relieves this symptom, the elastic tracheal rings causing the two lobes to spring apart. No further surgery is indicated, the patient making a good recovery without excision of thyroid tissue. The records of two such cases are on file at the University of California Hospital. In both instances the possibility of malignancy was seriously considered. In one of these streptococcus viridens was cultivated from a small section removed from the isthmus. An identical organism was obtained from the patient's throat.

Under the heading of chronic thyroiditis, tuberculosis and lues must be given brief mention. Tuberculous thyroiditis is a common incident of miliary tuberculosis. However, as a primary condition it is extremely rare and is very difficult of diagnosis. Mosiman, in 1917, gave an excellent report of nine cases. None of these had been correctly diagnosed before operation. Their true nature was found only after careful pathological study. Seven had been clinically diagnosed exophthalmic goiter. Two had exophthalmos. These nine cases represented less than 1 per cent of available material.

Syphilitic thyroiditis, always a rare disease, has, under the rationale of modern anti-luetic treatment, become an even less frequent finding. Here, again, malignancy has been usually considered and diagnosis only obtained by histologic study or by response to treatment for concomitant lues.

A third type of chronic inflammation—a diffuse thyroiditis of non-specific etiology—has been made the main basis for our investigation. In exophthalmic or hyperplastic goiter, cells of the lymphocytic series are an acknowledged part of the pathological picture. Such "round cells" may be grouped in follicles or scattered between the acini. When the infiltration is more advanced and is associated with desquamation and fibrosis, the picture becomes, in part at least, that of a chronic thyroiditis. At times the chronic inflammatory reaction is so advanced as to dominate the picture, and we find no evidence of accompanying hyperplasia. This condition, a true chronic diffuse thyroiditis, is very difficult of diag-

nosis. Thus, of seventeen such cases selected for their typical pathological picture from the files of the University of California Hospital, only three were correctly diagnosed pre-operatively, the condition in eight being called toxic adenomata, and in the remaining six, hyperplasia.

Because of this high percentage of error in diagnosis, a careful study of the case records of these patients has been made in an effort to determine any clinical points of differentiation which might aid in establishing pre-operatively the true nature of the pathological condition.

A second series (20 cases) in which the pathological picture was that of hyperplasia, with an associated chronic thyroiditis, was also analyzed from the standpoint of the clinical picture in an endeavor to establish grounds for a secondary diagnosis of inflammation. Many authorities feel that such an inflammatory reaction always is to be found in hyperplasia of the thyroid, and that it plays a part in the etiology of exophthalmic goiter. Against this view, definite evidence of associated thyroiditis has only been found in about 50 per cent of cases in our pathological examination of hyperplastic thyroid material.

From the analysis of these two groups of cases it is believed that the following points may suggest chronic inflammation of the thyroid, either as a clinical entity or as a secondary condition in a frank hyperplasia:

(1) A history of recent severe infection in the mouth (particularly tonsillitis). (2) Symptoms and signs of decreased function, such as falling hair, thinned eyebrows, dry skin, together with hyperthyroidism—a mixed picture often seen—suggests thyroiditis, with or without hyperplasia. (3) A slight swing in the temperature curve is suggestive. (4) On palpation, indurated areas may give a nodular impression, strongly suggesting adenomata. Even at operation, the surgeon may mistake this variation in consistency in different parts of the gland for encapsulated tumors. (5) Practically always, adhesions of the surrounding muscles to the capsule of the thyroid are noted. Chronic inflammation is, perhaps, more logically a cause of such adhesions than Roentgen therapy. (6) A tender lymph node over the isthmus, in one case of frank hyperplasia, led to an additional diagnosis of thyroiditis.

In differentiating between chronic thyroiditis alone, and hyperplasia with inflammation, the following points may be of value: (1) Exophthalmos, bruit, and thrill are pathognomonic of hyperplastic goiter. (2) Tenderness over the gland is common in thyroiditis. (3) The basal metabolic rate is rarely elevated in chronic thyroiditis without associated hyperplasia, and may be even below normal. (4) The gross picture at operation of a vascular friable adherent gland, which on section shows a mottled surface and increased fibrosis, will suggest thyroiditis.

Most of these points are only suggestive leads which may, when a number of them are noted, be of sufficient weight to warrant a diagnosis of chronic inflammation with or without hyperplasia.

Absorption of products of inflammation, rather

than a true thyrotoxicosis, may account for the toxic picture seen in some of these cases. For instance, a hemoglobin of 30 per cent in one case of diffuse thyroiditis may have in part resulted from the chronic infection.

Pathologically, the gross picture of chronic thyroiditis, as in hyperplasia, presents in varying degrees a meatiness of the gland, due to absence or marked diminution of the colloid content. The cut surface in thyroiditis, however, shows a faintly yellowish tint with a mottled appearance, due to grayish spots scattered over the surface, while in hyperplasia the uniform resemblance to fresh veal, grayish pink in color, is diagnostic.

Microscopically, thyroiditis is shown to be a replacement of thyroid epithelium by scar tissue or other inflammatory elements. The appearance of lymph follicles has no significance. There is destruction of thyroid epithelium and a so-called "round-celled" reaction under the capsule, along the blood-vessels, and between the acini. This infiltration may become so advanced as to practically destroy the glandular elements over large areas. The picture may show this progressive destruction, with replacement of epithelium by scar tissue, or there may frequently be found areas of regeneration. This regeneration resembles hyperplasia of the type in which new alveoli are being formed. Sometimes, with subsidence of inflammation, the picture may be confused at first glance with hyperplasia, and it is only by finding the irregular spotty changes in the gland that the true inflammatory nature of the pathology is recognized.

The treatment of chronic thyroiditis, when one considers the pathology, seems rationally to consist in the removal of the diseased tissue. Eradication of foci of infection within the mouth would also appear to be logical. A bilateral subtotal lobectomy has been performed on all the patients in this series. The convalescence has been quite similar in most instances to that of the ordinary exophthalmic goiter.

In closing, a partial follow-up report of the cases under analysis may be of interest. Of the seventeen cases of chronic thyroiditis from four years to six months, post-operative, nine have answered follow-up letters recently. One received no benefit from her surgical treatment, became progressively weaker, developed a psychosis and died. Another died a few months after operation of an apparently independent condition. Of the remaining seven, two report that they were moderately improved, two that they were very markedly improved, and three that they were completely cured by their surgical treatment. Concerning the effect of treatment on signs and symptoms of insufficiency, four noted marked improvement and three observed no change.

From the follow-up study of the cases showing hyperplasia with thyroiditis, prognosis was far better than in the pure thyroiditis cases. Nine out of the twenty cases answered follow-up letters. All of these felt that operation had cured them. Signs of hypothyroidism, described above as an important part of the clinical picture where hyperplasia is accompanied by thyroiditis, were more persistent. Only three noted return to normal, in amount and

texture of their hair and a cleaning up of their skin. Four considered that there was some improvement, while in the remaining two these conditions have become worse. The two cases of "iron-hard" thyroiditis are being closely followed. Both are very much improved. One shows a suggestion of hyperfunction, while the other evidences mild insufficiency.

#### DISCUSSION

JOHN HUNT SHEPARD, M.D. (Growers Bank Building, San Jose, California)—Various degrees of round-cell infiltration and fibrosis, as described by the authors, have long been recognized as a part of the pathological picture in certain cases of exophthalmic goiter. Wilson pointed out that by a careful consideration of these factors, together with the degree of desquamation, he was able to judge the relative degree of toxicity, and also tell whether the toxicity was increasing or decreasing.

The frequency of marked round-cell infiltration and fibrosis in any series will depend largely upon the stage of the disease when thyroidectomy is performed. It will be most marked in the specimens removed from patients who have had one or more thyroid crises and who are operated upon when their metabolic rate is approaching or has returned to normal without much decrease in the size of the thyroid gland.

The authors, in this excellent study, have emphasized, though not specifically so stating, the important point that thyroid surgery should be preceded by definite indications, i. e., toxicity, as shown by an increase in the B. M. R.; pressure symptoms; to prevent the future development of hyperthyroidism; acute suppurative conditions; tuberculosis; malignant conditions; and for cosmetic purposes.

WALLACE I. TERRY, M.D. (384 Post Street, San Francisco)—The pathologic picture of true exophthalmic goiter is a hyperplasia with more or less round-celled infiltration. In some cases there is a marked dominance of the round-celled infiltration, and therein we approach thyroiditis. It at first seemed to me that the authors were making subdivisions of a single process, but I am now convinced that they have described in chronic thyroiditis an entity which has heretofore not been clearly recognized. It may well be that some definite organism is responsible for the condition, and it would be well to carry out bacteriologic studies, using relatively large masses of the gland, in accordance with the technic described by Rosenow several years ago.

The final results in these cases are of great importance, particularly as regards hypothyroidism. It will require the study of a considerable number of cases before one can arrive at fair conclusions.

C. L. HOAG, M.D. (177 Post Street, San Francisco)—I think this paper contributes some very important evidence to the theory of infection as a cause of hyperplasia. Round-cell infiltration is very frequently associated with hyperplasia. Doctor Searls has found this condition in about 50 per cent of the material examined at the University of California, but other writers place the percentage much higher.

The findings suggest that if the infection is sufficiently acute an abscess results; if it is less acute there is scar formation and secondary contracture producing the typical ligneous thyroid described. If the process is still less acute there is a combination of hyperplasia and scar tissue, while if chronic we have the usual picture of a true hyperplasia with round-cell infiltration.

Clinically, we are familiar with the beginning of hyperthyroidism or with exacerbations of this disease which have been caused by, or associated with, acute infectious processes.

I believe that the recognition of these various stages of inflammatory reaction in the thyroid may lead to a better understanding of the causes of thyroid hyperplasia.

H. LISSER, M.D. (Fitzhugh Building, San Francisco)—The authors are to be commended for calling our attention to this interesting and confusing disturbance of the thyroid gland. It is to be hoped that their painstaking



analysis of a representative group of patients suffering from chronic thyroiditis with and without hyperplasia will be helpful to many of us who have occasion to study various types of goiter. I am, however, inclined to the belief that a correct diagnosis of chronic thyroiditis will remain exceedingly difficult, even with the suggestive hints that the authors have advanced.

Although I agree that medicinal and x-ray therapy is apt to be futile in this condition, I would urge a conservative surgical attitude as well, except in those cases where signs and symptoms and metabolic rate point to an associated hyperthyroidism. In pure chronic thyroiditis without compensatory hyperplasia, the inflammatory process is apt to be fairly diffuse and involve a considerable portion of the gland. It would seem to me an impossibly delicate procedure to remove just the diseased area and leave sufficient normal thyroid tissue for adequate function. It is true that a consequent post-operative hypothyroidism could be controlled by thyroid extract, but it would seem wiser not to interfere at all unless hyperthyroidism complicate the picture, or local pressure signs and symptoms demand relief.

I am much impressed with the conception that the pathological picture of a chronic thyroiditis, with the addition of hyperplasia, may afford a sound and logical explanation for the not uncommon "mixed" case, where evidence of hyper and hypofunction co-exist in the same individual, a circumstance that has heretofore "mixed" the physician quite as much as the patient, and where a perverted or "dysfunction" has been assumed as the only theoretical "out" from a contradictory situation.

This paper affords a fine example of clinical pathological co-operation.

The present vogue among women to become thin and willowy in order to comply with fashion's dictates has been attended with so many evil results in the way of impaired health that a plea has been made to medical men to discuss the subject from the health standpoint. Accordingly the question of whether women should reduce and how, if they are to retain their health, was debated in New York on February 22 at a gathering of physicians, dietitians, and statisticians at the New York Academy of Medicine, under the direction of the American Medical Association. The meeting really was called at the request of Mrs. William Brown Melloney, editor of the *Delineator*, who asked medical authorities to provide some age, weight and height tables to guide women in determining at what weight they would be healthiest, and possibly to suggest some means by which the question of how to reduce might be answered. In the discussion that resulted one of the speakers said that he was told by Poiret, the French dressmaker, that American women were almost the only women in the world who wanted to look like barber poles. Other speakers called attention to the evil effects of improper dieting and the use of drugs in an effort to reduce. One of the serious results of reducing is in the production of sterility. Over-exercise, rolling machines, starvation diet, going without water, the use of thyroid, iodine, and smoking to excess, all were condemned as injurious. The untutored person frequently eliminates vitamins from his food by doing without cream, butter and other foods, thus bringing about an unbalanced diet that is very harmful and may lead to a pathological condition. The consensus of opinion was that no reducing should be undertaken except under the advice of a competent physician, and that all women need a well-balanced ration, but that there would be less tendency to accumulation of fat if the well-balanced ration is limited in amount and with the requisite amount of sleep, and with temperate habits. The American women were further admonished that it is better to be reasonably fat and healthy than to be thin and sickly.—*Journal Indiana Medical Association*, March, 1926.

All over the country Charleston marathon contests are being held. Usually four or five of the contestants jig for some thirty hours, and are then carried to the city hospitals in a state of collapse. Silly? Of course. And what an absurdity it is for the cities to allow such contests and then care for the winners at the public's expense.—*The Outlook*.

## SOME SURGICAL ASPECTS OF TUBERCULAR PERITONITIS

By CHARLES D. LOCKWOOD \*

*Brief report of two cases, with discriminating digest of current practices in diagnosis and treatment.*

DISCUSSION by W. R. P. Clark, San Francisco; E. C. Moore, Los Angeles; C. T. Sturgeon, Los Angeles.

TUBERCULAR peritonitis is a border-line affection concerning the surgeon and physician, including the tuberculosis specialist. Some recent experiences have impressed me with the fact that it is often overlooked, and that it is not given sufficient weight in the average physical examination. Its relative rarity and the obscurity of its symptoms account for our failures to detect it.

Before the discovery of the tubercle bacillus several forms of chronic peritonitis were recognized and described under different names, chief of these being the so-called chronic idiopathic peritonitis. Most of these cases were, doubtless, of tubercular origin, but there is still a small number of cases in which the specific cause is not clear. Although we now recognize the tubercle bacillus as the specific cause of tubercular peritonitis, there is still much difference of opinion as to the pathologic anatomy of the disease and its mode of invasion. It is impossible to demonstrate the tubercle bacillus in many cases of chronic peritonitis, even when the characteristic lesions, i. e., tubercles, are present.

While there are many interesting factors in the causation of the disease, such as age, heredity and trauma, the greatest interest centers in the mode of infection. Most authorities agree that the peritoneum is rarely the site of the initial lesion. The vast majority are secondary to some other focus, but the avenue by which the infecting organism

\* Charles D. Lockwood (295 Markham Place, Pasadena, California). M. D. Northwestern University, 1896; A. B. Northwestern University, 1893. Graduate study: Internship Cook County Hospital, Chicago, 1896-1897; University of Vienna, 1906, 1911. Practice limited to surgery and diagnosis since 1911. Hospital connections: Pasadena Hospital. Previous honors and services: President Western Surgical Association; Professor of Oral Surgery, University of Southern California College of Dentistry; member of staff Los Angeles General Hospital; Major Medical Corps, United States Army; organized Red Cross Ambulance Company No. 1, 1916; C. O. Camp Hospital No. 33, Brest, France, during World War; five months on western front with surgical team. Scientific organizations: Western Surgical, Pacific Coast Surgical, Los Angeles County, Clinical and Pathological, Los Angeles Surgical, American Medical Association, and California Medical Association. Appointments: Commanding Officer Surgical Hospital No. 71, United States Reserve. Publications: "Diagnosis of Surgical Lesions of the Kidney" (Surgery, Gynecology, and Obstetrics); "Bier's Hyperemia, or the Use of the Elastic Bandage in the Treatment of Disease" (Southern California Practitioner, April, 1908); "Surgical Treatment of Trifacial Neuralgia" (California State Journal of Medicine, September, 1909); "Venereal Diseases in Children, Their Causes and Prevention" (Bulletin of American Academy of Medicine, October, 1910); "Surgical Treatment of Gastric and Duodenal Ulcers" (Southern California Practitioner, October, 1909); "Present Status on Prostatic Surgery" (California State Journal of Medicine, June, 1913); "Ulcer of the Stomach in Children before Puberty" (Surgery, Gynecology, and Obstetrics, October, 1914); "Ureteral Fistulae" (The Urologic and Cutaneous Review, November, 1916); "Surgical Treatment of Banti's Disease" (Surgery, Gynecology, and Obstetrics, August, 1917); "Review of Five Hundred Operations for Battle Casualties" (California State Journal of Medicine, June, 1919); "Surgery of the Chest" (California State Journal of Medicine, March, 1921); "Tumors of the Pancreas" (Journal American Medical Association, January, 1922); "Some Newer Aspects of Chest Surgery" (International Clinics, September, 1922); "The Role of the Physician in the Education of the Nurse" (Report of Twenty-fourth Convention of American Nurses' Association); "Four Cases of Chronic Intestinal Obstruction, Due to Inflammatory Adhesions" (International Clinics, Vol. IV, Series 35).

actually reaches the peritoneum can seldom be demonstrated. One of my patients, in whom a tuberculous retroperitoneal gland had ruptured into the peritoneal cavity, suggested the possibility of direct contact infection as a fairly common occurrence.

It is questionable whether the tubercle bacillus ever implants itself directly on the peritoneum. Most pathologists deny such a possibility. One would naturally think of the intestine as a common source of infection, since those suffering from pulmonary tuberculosis are constantly swallowing myriads of bacilli. Such mode of infection would seem plausible in the presence of tubercular ulcers in the intestine, in view of the well-known fact that colon bacilli readily penetrate a damaged intestinal wall and invade surrounding structures. The fact remains that primary infection of the peritoneum has never been proven.

The primary focus of disease can seldom be discovered post mortem because of the advanced stage of the disease, and at operation the limited exposure permissible offers little opportunity for investigation. There is experimental evidence to prove that direct infection of the peritoneum may result from the injection of tubercle bacilli into the mesenteric arteries, and the frequency of the disease in children suggests the possibility of lymphatic transmission of the disease.

I have encountered several cases of tubercular appendicitis in young people with predisposition to tuberculosis, in which the retroperitoneal lymph nodes were caseous, and in one instance tubercle bacilli were demonstrated in the enucleated glands. In view of these facts, it seems reasonable to suppose that infection travels from the intestine to the lymph glands, and that these in turn break down and discharge tubercle bacilli into the peritoneal cavity.

The well-recognized routes of invasion are:

1. Hematogenous. This is undoubtedly a common mode of invasion. Generalized miliary tuberculosis, involving the peritoneum, can hardly be explained in any other way. Such infections often follow operations upon the tuberculous foci in individuals of low resistance. There is little reactive inflammation in such cases, such as peritoneal exudate, adhesions and thickened mesentery, and they are rapidly fatal. Case 2, reported below, was doubtless of this type.

2. Lymphatic extension. These lesions are of a progressive nature, more chronic in form, and lead to inflammatory reaction. They are most apt, according to Friedlander, to lie in the intestinal submucosa, in the lymph glands, and lymphatics. It is often difficult to distinguish such lesions from those arising from continuity, for contiguous lymphatic nodules may coalesce and break down.

3. Continuity. By this is meant the extension of the tuberculous process from one organ or tissue to the other without the intervention of healthy tissue. The most common illustration of this form of infection is that arising from the Fallopian tubes. There is still much disagreement as to whether infection travels from the Fallopian tubes to the peritoneum or the reverse. Dr. H. R. Wahl, reporting ten cases of tuberculous salpingitis, main-

tains that the route of infection is from the peritoneum to tubes, the bacilli being carried into the tube by ciliary action and by the muscular movements of the tube. The bacilli find a more favorable nidus in the mucosa and submucosa of the tubes. Experimental evidence supports this theory. It is further supported by the fact that tubercular peritonitis recovers, in the vast majority of cases, after removal of the infected tubes. The extension of tuberculosis by continuity is of great surgical importance, because it is possible to remove the disease and bring about complete restitution. Abdominal organs, such as the Fallopian tubes, the appendix, and the cecum can be completely removed surgically and infection of the peritoneum prevented. Where tubercle bacilli once gain access to the peritoneal cavity, extension takes place by diffusion and gravity.

The tubercle, which is the essential lesion in all forms of tuberculosis, is often confused by surgeons with carcinoma nodules. Since the microscope and histologic examination have come to play such an important role in diagnosis, surgeons have lost the keen powers of observation which characterized the older clinicians and, as one author has said, "The recognition of the tubercle by the unaided eye has become a lost art."

Two forms may be distinguished at the operating-table: (a) the very small, superficial submiliary type, affecting chiefly the surface of the peritoneum, and (b) the larger miliary type which invades the deeper structures of the peritoneum and in which there is a tendency to fibrosis. Both forms may be distinguished from carcinoma nodules by their tendency to caseation and by the fact that the latter tend to dimpling or umbilication of their summits.

The differential diagnosis between tuberculosis and carcinoma of the peritoneum is not always possible. The symptoms and physical signs are often identical. The chief of these are gastro-intestinal disturbances, ascites, enlarged retroperitoneal glands, swelling and tenderness of the abdomen, thickened omentum, tumor-like masses in the abdomen, and vague, more or less constant, abdominal pain. Chief reliance must be placed upon the history and the age of the patient. Tubercular peritonitis is almost invariably associated with tuberculosis elsewhere, and the vast majority of cases are in individuals under 40.

Mild cases of tubercular peritonitis are commonly overlooked. I know of no abdominal disease in which so many symptoms and signs common to other diseases are present. Symptoms such as fever, malaise, and rapid pulse are common to all infectious diseases. Laboratory tests are of little value, as the bacilli can rarely be found. The tuberculin skin test is unreliable, owing to the frequency of tuberculosis in other organs. The white blood count is rarely high, but there are notable exceptions. The abdominal signs are all simulated by other diseases, such as appendicitis, tumors, and ascites.

*Treatment*—The treatment of tuberculous peritonitis is not very satisfactory. The disease was considered invariably fatal prior to the work of Koenig in 1884. Since that time many methods of treatment have been advocated. A review of recent lit-



erature would indicate that there are three methods of treatment of undoubted value.

First. *Operative Treatment*—Collected statistics from all parts of the world show from 50 to 70 per cent of recoveries after laparotomy. Cases untreated show a much higher mortality. Cases suitable for operation are those of the exudative type. Operation should not be performed before the fourth month of the disease. In the early stage, the bacilli are too virulent to permit operation, and the exudate at this time is beneficial, acting as an antitoxin. The technique of the operation is simple. A median-line incision below the navel, sufficiently long to permit of thorough exploration. If infected organs are found, such as tubes, appendix or intestine, they should be removed. The wound is closed without drainage. The consensus of opinion seems to be that the operation does good by producing a hyperemia and stimulating the circulation.

Second. The introduction of air or oxygen into the peritoneal cavity is undoubtedly of value in this disease. Many cases of cure, after pneumoperitoneum, have been reported in both foreign and American literature. Filtrated air or oxygen may be forced into the abdomen, either through a needle puncture in the abdominal wall or through the Fallopian tubes in women. The air probably acts in the same manner as in laparotomy by stimulating active hyperemia in the peritoneum.

Third. *Treatment by Heliotherapy*—Tuberculosis in all its forms has been cured by this method of treatment. Whether the chemical rays come from the sun or are artificially produced, the result is the same. Gerstenberger and Wahl report two cases treated by the mercury quartz lamp with apparent cure. The remarkable results of Rollier in the treatment of all forms of surgical tuberculosis are well known. There are many other methods of treatment advocated for tubercular peritonitis, but they are of doubtful value. Whatever method is employed, the well-recognized hygienic, dietetic and medicinal measures should be used as adjuvants.

#### CASE REPORTS

I. Mrs. W. A. C. A young married woman. For several years she complained of pain in her right lower abdomen. Three months prior to consulting me she had a typical attack of acute appendicitis, with pain, fever, vomiting, and right rectus rigidity. Tenderness persisted for a month or more following this attack, and subsided gradually. One month later she had a similar but less severe attack at her menstrual period. For two days prior to operation she had been miserable with gas pains. She had no nausea, no respiratory symptoms, and no urinary difficulty. Six months previously she had had an attack of acute pyelitis.

The examination was negative except for tenderness and slight rigidity in the right iliac fossa and tenderness on deep palpation to the left of the midline at the level of the navel. At operation the appendix was found free from adhesions and little evidence of recent infection. It seemed insufficient to explain the symptoms, and further search was made. A conglomerate mass of caseating glands was found in the mesentery of the ileum. This mass was necrotic and at the point of rupture. The glands were enucleated and the abdomen closed without drainage.

The histologic examination showed no evidence of tuberculosis in the appendix. Smears from the pus found in the glands showed many leucocytes, but no bacteria. There was much caseous material and calcareous granules characteristic of tubercular pus.

The patient fully recovered and has had no recurrence of her attacks.

II. Mrs. L. Y. A young married woman 26 years of age. Called to see her in consultation March 1, 1924. Patient had been well up to three months prior to my visit, when she suffered an attack of influenza from which she never entirely recovered. Her most marked symptoms were loss of weight, slight cough, abdominal tenderness, most marked in the epigastric region, vomiting, which always occurred at night and which bore no relation to food.

Physical examination revealed no disease of the lungs. The patient was extremely emaciated, her abdomen was tender and rigid all over. On the left side of the abdomen was a tumor mass the size of a lemon, which moved on respiration and was entirely below the rib margin. The blood showed a marked secondary anemia, with a hemoglobin of 55 per cent. The urine was negative, except for a trace of albumin and three plus indican. The radiographic examination was negative, both as to the lungs and the abdomen. A tentative diagnosis was made of either tubercular peritonitis or carcinoma of some abdominal organ.

*Operation*—March, 1924. An exploratory operation was done for diagnostic purposes. The intestine was found extensively adherent to the abdominal wall, and the peritoneal coat was covered with miliary tubercles.

*Pathologic Examination*—Histologic examination of small pieces of excised peritoneum showed caseating miliary tubercles. No bacilli were found. The patient died of inanition and exhaustion.

I might report a number of similar cases, but these are enough to emphasize the obscure character of the disease and its insidious onset. Patients complaining of vague abdominal pains, with distension, rapid loss of weight, a continuous fever, and marked leucopenia should be suspected of having tubercular peritonitis.

#### DISCUSSION

W. R. P. CLARK, M.D. (516 Sutter Street, San Francisco)—The subject of Doctor Lockwood's paper is of extreme interest to me, and while it deals primarily with tubercular peritonitis, it opens up a large field for discussion, namely, abdominal symptoms in the tuberculous. Many of these symptoms are toxic or reflex, particularly those in the upper abdomen, some are due to enteritis without an involvement of the peritoneum when the symptoms are first noticed, some to pelvic disorders as Lockwood has mentioned, some to inflammatory changes in the region of the appendix, and some to diseased conditions in other organs. In our work (diseases of the chest) most of the cases we see are secondary to lung lesions, and I wish to emphasize the point of always looking for the focus of infection in suspected tubercular peritonitis cases. I have seen patients where the abdominal symptoms so overshadowed the lung symptoms that an advanced lesion in the lung was entirely overlooked until after some abdominal operation had been performed without material relief to the patient. I believe in cases of tubercular peritonitis, complicating tuberculosis of the lungs, heliotherapy or other light treatment should be given a trial before surgical interference.

E. C. MOORE, M.D. (511 South Bonnie Brae Street, Los Angeles)—Dr. Lockwood has covered the subject well in his excellent paper, and there is little to add to that given by him and Dr. Clark.

There has been much discussion as to whether surgery or medical treatment gives better results in these cases of tubercular peritonitis, and as a consequence numerous statistics have been recorded by physicians and surgeons. Opinion is still somewhat divided, but on the whole, perhaps, laparotomy under proper restrictions is most in favor. However, to my mind, there should be a combination of both, and certainly medical and hygienic treatment should be tried before surgery is attempted in the average run of cases. For that matter, such treatment would be as essential in the post-operative care as in the pre-operative. Heliotherapy seems to be giving good results also. Claims have been made of cures from 40 to 80 per cent by the adherents of both surgical and medical treatment.

Tubercular peritonitis may assume an acute or chronic

form. The chronic form seems more amenable to treatment. My experience has shown me it is unwise to operate in the febrile stage. In the exudative type there is usually too much fever and emaciation to attempt surgery at once.

Patients for surgery must be selected: those with effusion are usually chosen; the "dry" and ulcerative cases avoided, and cases with extensive tuberculosis elsewhere are contra-indicated. In suitable cases surgery does accelerate a cure.

C. T. STURGEON, M.D. (1136 West Sixth Street, Los Angeles).—As Dr. Lockwood has pointed out, the condition of tuberculosis of the peritoneum occurs more frequently than is recognized. It may be well to remember that it can occur in a latent form without symptoms, and discovered only at autopsy or during laparotomy for other conditions. Secondly, as is well known, the picture itself is often so very obscure, due to the great variety of its manifestations.

In the surgical treatment for the condition, W. J. Mayo in 1910 pointed out the importance of the fact that when the local lesion could be found and removed a cure might be expected when the section was taken through non-tuberculous tissue in a higher percentage of cases than by simple laparotomy. This holds especially true when the appendix, Fallopian tubes, or ileo-cecal coil are involved.

It is in this particular type that no regard is made as to whether the peritoneum contains fluid or not; but particular regard, as always, should be given to the question of tuberculosis elsewhere.

When the focus of infection cannot be found, then the remaining most favorable cases are those of the ascitic form.

Operation in the fibro-plastic form offers many possibilities for harm—structures are with difficulty recognized and resulting fistulas often occur, and the gut is very easily torn through.

The introduction of oxygen into the peritoneal cavity in cases of tuberculosis of the peritoneum undoubtedly has been of value in some cases; however, as has been stated, the diagnosis, if often obscure, there is some slight risk of puncture of the intestines in introducing a needle through the abdominal wall and, it seems to me, that a laparotomy is more often indicated because:

1. If there be a local focus of infection, such as tuberculous appendix, etc., it can be removed.
2. The air is introduced at the time of the laparotomy and fluid, if present, freely drained.
3. The diagnosis, which is often obscure, is made definite by a laparotomy.

*Important*—Surgical cases of tuberculosis of the peritoneum should be selected cases when a possibility of cure is expected.

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Some cinchona trees being thrown into a pool of water in Peru lay there till the water became so bitter that everybody refused to drink it. However, one of the neighboring inhabitants being seized with a violent paroxysm of fever, and finding no other water to quench his thirst, was forced to drink of this, by which he was perfectly cured. He afterward related the circumstance to others, and prevailed upon some of his friends, who were ill of fever, to make use of the same remedy, with whom it proved equally successful. But it was not only the casual experience of an uncivilized people which discovered this valuable remedy, but the first prejudices against its use, which were very strong, were counteracted by the influence of a religious sect (the Jesuits), totally unconnected with the practice of medicine; and physicians were ultimately taught how to use it with effect by a man who was vilified both at home and abroad as an ignorant empiric. It is amusing to contrast this first rude natural infusion with the present neat and condensed form of exhibiting the bark: for now a grain or two of the sulphate of quinine is the ordinary dose of the remedy.—The Gold-Headed Cane.

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We live in crowds, and crowds are cowardly. Perhaps this is why the American, who used to be independent to the point of absurdity and disputations beyond comparison, is becoming a moral coward.—Saturday Review of Literature, March 27, 1926.

## THE RECOGNITION OF PSYCHONEUROSES †

By JOHN B. DOYLE \*

*The time would seem to be past when it was necessary to make a diagnosis of psychoneurosis by exclusion. Hysterical patients exhibit exaggerated emotional excitability, marked variability in their complaints and findings, and remarkable non-conformity in their symptoms and signs, to the limitations imposed by the accepted conceptions of anatomy, physiology, and pathology. They are no less worthy of a complete history and thorough physical examination than other groups of patients. Either they must look to the medical profession for scientific advice, persuasion and re-education, or resort to the "Miracle Man" of "Miracle Mountain."*

DISCUSSION by John R. Llewellyn, Salt Lake City, Utah.

IN ONE form or another, psychoneuroses constitute a great part of the work of all physicians, and are probably one of the greatest sources of unhappiness to people of all ranks of society. Every patient has an emotional as well as a physical side. Neglect of this truth has been fruitful in the development of Christian Science and the other cults and fads which have sprung up sporadically as far back as we have any record of medical history. In the desire of the people for emotional relief, they have been glad to accept almost any idea and any sort of management. The inability or failure to make adjustments throughout life lies at the bottom of many of these psychoneurotic disorders. The conception that anyone can develop a psychoneurosis or even hysteria, provided sufficient emotional strain is undergone, may not be entirely correct, but it does not fall far short of the mark. Heredity, however, plays a more important part in the development of most functional nervous disorders. The immediate causes are infinitely various, and constitute only "agents provocateurs," that is, exciting causes which merely rouse a latent disorder. The traumatic neuroses often arise as a direct result of shock, but hysteria in general is more usually the result of long-continued anxieties and more often due to the troubles inflicted by others rather than to those inherent in one's own lot. The importance of fear in the development of functional disorders can scarcely be overestimated. Who has not been impressed by the contrast between the morbid mental state of persons living in fear of tuberculosis, and the calm assurance of patients with well-developed tuberculosis living in sanitariums? A casual remark or an opinion from doctors, nurses, and at times even laymen, has often been the source of weird clinical pictures which have all but baffled medical men. That organic disease itself may bring about functional disturbances which distort to a greater or lesser degree the characteristic phenomena of the organic disease is well known.

Hysteria is a disease of the mind, manifesting

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† Read before the Utah State Medical Association, Logan, Utah, June, 1924, and before the Wyoming State Medical Society, Cody, Wyoming.

\* John B. Doyle (Mayo Clinic, Rochester, Minnesota), M. D. Rush Medical College. Practice limited to neurology. Hospital connections: Mayo Clinic and Associated hospitals. Appointments: Associate Section of Neurology, Mayo Clinic. Publications: Glossopharyngeal Neuralgia (Med. Clin. N. Am. 1923, vii, 285-292). A Study of Four Cases of Glossopharyngeal Neuralgia (Archiv. of Neurology and Psychiatry, 1-23-25); Clinical Manifestations and Treatment of Epidemic Encephalitis (California and Western Medicine, 1924).



itself less in intellectual disorders than in changes of character and mood, and which conceals its true nature behind an almost unlimited number of physical symptoms (Oppenheim). At one time it was taught that hysteria was inherited and that the hereditary background was manifested early in life by a nervous excitable temperament. It is now generally agreed that mental strain, suggestion, and imitation play important parts in the development of this trouble.

While it is not my purpose here to discuss the mechanism involved in the development of functional symptoms and signs, it may not be amiss to state briefly the more common conceptions as formulated by the leading psychiatrists of recent times. Charcot was emphatic in his statement that all disease of the body caused by imagination was hysterical. Oppenheim was of the opinion that hysteria was the result of exaggerated emotional excitability and morbidly exaggerated influences on otherwise normal motor, sensory, vasomotor and secretory functions. Breuer and Freud believe that mental trauma which does not lead to an emotional discharge, which relieves the mind of emotional tension, continues to exert a latent effect, to influence the moods, and to produce a conversion of emotional excitement into physical phenomena in such a way that they become independent of the original mental experience. In later years Freud has added the doctrine that all complexes are basically sexual in their content. While Freud uses the conception of sexuality in its broadest sense, his doctrine along this line has not been generally accepted. Usually, the primary cause of hysteria is an abnormal state of mind: exaggerated emotional excitability associated with a diminished threshold of stimulus.

The number of psychoneurotic persons afflicted with migraine is rather impressive. While not a direct etiologic factor, it would appear to afford a fertile substratum for the development of a multiplicity of abnormal cerebral reactions. One of the peculiarities of certain psychoneurotic persons is to recall past mental experiences in a morbidly exaggerated way, so that the reproduction of memory pictures which have unpleasant associations is facilitated and increased. This mental state is illustrated in Case 1.

#### REPORT OF CASES

**CASE 1**—A man, age 45 years, a machinist, came to the Mayo Clinic October 9, 1920, complaining of a painful amputation stump. His right leg had been burned in an oil-can explosion at the age of 11, and several amputations had followed. Four years before, an amputation had been performed through the lower third of the thigh, and an Esmarch bandage used. Since then there had been a continuous "tight sensation" in the stump. The patient spent most of his time in hospitals, and was unable to work. The distress was intolerable when he was tired, or when he heard harsh music; it did not interfere with sleep. There was no definite tenderness over the stump and no neuromas could be palpated.

*Comment*—The patient was very self-conscious, and unable to forget past experiences, for example, a melody heard recently. His memory of the sensation of tightness, of which he was conscious the moment he recovered from the anesthetic, continued and was aggravated when he was at all exhausted.

His exaggerated excitability was illustrated by his response to harsh music. To jump at conclusions, however, is inadvisable. A woman suddenly developed an exceedingly severe pain in one of her molar teeth after the unpleasant experience of hearing a noted singer "flat" a high note. Persistence of the pain led her to visit a dentist, who discovered a periapical abscess at the root of that tooth.

Pain is an invariable symptom of hysteria; it is invariably present in one form or another, and at one time or another. In contradistinction to pain of organic origin, it is very likely to be constant, and to be variously described as a sensation of tightness, pressure, tension, uneasiness, drawing, or bursting. It may be expressed as headache or backache. The next case presents a picture in which pain is the dominant complaint, and is associated with gastrointestinal symptoms.

**CASE 2**—A man, age 60 years, came to the clinic March 16, 1923, complaining of pain in the abdomen of six weeks' duration. The patient had awakened one morning, six weeks before, with a dull heavy pain over the entire abdomen. The pain was persistent and was definitely worse at night. The patient became markedly constipated, so that he required an enema daily. One week before the onset of the trouble he had consulted a neurologist concerning his daughter. He was told that she had multiple sclerosis, would be a helpless cripple, and would have to be cared for as a child. He immediately noted a peculiar sensation over the epigastrium and hypochondriac region. It was not troublesome, however, until about one week later, when he awoke one morning to find that he had a definite band of tightness around the upper abdomen which was squeezing him like a tight corset. His family physician prescribed calomel, but his condition did not improve, and in the next few weeks he consulted a galaxy of internists. From the onset of the trouble he was afraid to eat, for fear of aggravating his symptoms. In 1908, following the loss of \$30,000, he had developed a severe bursting pain in the right half of the head, associated with a drawing sensation in the right upper cervical region. He was "cured" by a neurologist who "burned the pain out with electricity."

At the time of examination the patient had lost twelve or fifteen pounds in weight, had ceased to worry about his daughter, and had concentrated his attention on his own symptoms. Physical and neurologic examinations were essentially negative. He recovered under the influence of reassurance, explanation, persuasion, a combination of galvanism and faradism, graduated exercise, and a liberal diet.

*Comment*—The patient was unable to adjust himself psychically to the situations which arose in 1908 and 1923. The development of a syndrome which he could understand, and from which he could reasonably look for relief and sympathy, was a simple conversion. This case serves to emphasize the absolute necessity of taking a careful history in which the onset of the illness is discussed with the patient in considerable detail, and in which the character of the distress is determined as carefully as possible. The past history was very suggestive when coupled with the information obtained in the study of the present complaint. This patient exhibited characteristic emotional instability. It may be well to emphasize the fact that there is no definite impairment of memory in these cases, but that the marked inattention prevents normal perception of external impressions.

**CASE 3**—A man, age 24 years, came to the clinic March 27, 1924, complaining of headache and loss of memory. He had had migraine for many years. In

October, 1923, a 10-pound weight on the control cable of a freight elevator was accidentally pulled down on his head. The weight struck on the parietal area; he was not even dazed. One week later he commenced to have pain over the injured area; this was continuous during his waking hours. It was dull and aching in character, and radiated to the right occiput when severe. For two months he had been mentally confused, nervous, and irritable. He spoke in derogatory terms of the "boss," said that he earned more than \$100 a month, but did not get it, and referred to his place of work as a "damned hole." "Ice-cream work" got on his "nerves." He was a beneficiary of the Workmen's Compensation Act.

*Comment*—Dissatisfaction with his work and surroundings, coupled with the fact that he will receive compensation as long as he is disabled, evolved a traumatic neurosis. He was prepared to react abnormally under the slightest provocation.

Motor disturbance and anesthesia are symptoms which, like pain, are rarely absent with well-developed functional disturbance. Spasms of the facial muscles, the muscles of mastication, and those of the extremities are not unusual.

CASE 4—An unmarried woman, age 24 years, came to the clinic August 15, 1921, complaining of inability to open her mouth, and of paralysis of the face and of the left upper extremity. In July, 1920, she had consulted a dentist for relief from pain in a tooth. Extraction was decided on, and novocain was injected with a dental syringe. Immediately after this injection, her jaw closed and she had been unable to open it since. Her face became numb and pulled to the left. The dentist wedged her jaw open with his fingers and extracted the tooth. For some time thereafter she had severe pain in the jaw, and was unable to sleep. During the next seven months the dentist had treated her in a great variety of ways without relief. A month after the onset of her trouble she began to notice weakness, accompanied by anesthesia and paresthesia, which descended from the middle of the mouth down the left side of the neck into the arm. The sense of taste was lost on the left side, and movement of the tongue restricted to lateral movement to the right. She was unable to swallow on the left side, and the vision of her left eye was poor. Early in January, 1921, the dentist opened her jaws under nitrous oxid. January 25 she instituted a lawsuit for injuries sustained as the result of malpractice.

At the time of examination she was unable to use her left hand. She had lived on what liquids she had been able to pour through the right side of her mouth. General physical examination was negative. X-rays of the nasal sinuses and of the left temporomandibular joint, as well as the routine laboratory data, were negative. The patient held her teeth close together and rolled her lower lip under the upper on the left side. Her mouth was readily opened by putting a tongue depressor between her teeth.

Neurologic examination revealed a condition resembling trismus, bilaterally. There was a variable amount of weakness of the left forehead, mouth and platysma, a questionable disturbance of the tongue, and rather severe, but variable weakness of the left upper extremity, more marked distally. Pain, temperature, and tactile sensations were totally absent over the left half of the face, the left side of the neck and supra-clavicular area, and over the entire left upper extremity. The line of anesthesia on the face extended well beyond the median line onto the right half of the lips. In all other respects the neurologic examination was negative. A normal reaction was obtained on stimulation of the right and left halves of the face with galvanic and faradic types of current. She opened her left eye normally, reflexly, but was unable to open it on command. Although unable to move her left platysma and orbicularis oris, on smiling and laughing the left half of her face moved normally. She had no trouble in putting her left arm through her sleeve, but was unable to perform similar movements on command. The diagnosis was traumatic neurosis. She was advised that no treatment would be of value until the litigation was brought to an end.

*Comment*—The patient had been harassed by pain. She was frightened by the numbness induced by the anesthesia, and would have attempted to ward off further interference by trismus. The solicitation of relatives acted as a powerful, though unwitting suggestion. The objective evidences of disease in this girl were paralysis of the face, loss of taste, trismus, and a type of anesthesia which conformed to nothing conceivable on an organic basis. Reflex actions were normal. Voluntary power in the facial muscles was lost. The patient was moody, sullen, felt abused, and complained that none of the doctors would "touch her case." The element of uncertainty introduced by litigation undoubtedly was an aggravating factor and would have nullified any attempt at psychical readjustment.

Paralysis is an exceedingly common accompaniment of the psychoneuroses. It may involve the facial muscles, or the muscles of the extremities. Hemiplegia and monoplegia, in all stages of development, are not unusual. The extrinsic and intrinsic muscles of the eye, however, are almost invariably spared. The most noteworthy characteristic of these disturbances of motor function is their variability. Sensory disturbances are the general rule, and tend to appear in the classical glove and stocking forms of anesthesia as hemianesthesia with localized areas of normal sensation, and as irregularly shaped variable patches of variegated disturbance. Occasionally there is loss of all sensation, both superficial and deep, with no disturbance of co-ordination, such as one would logically expect if a similar picture were discovered in a patient suffering from organic disease. Often there is also tenderness over certain portions of the body, which is variable and out of all proportion to evident pathologic processes. Visual disturbances are common and are by far the most frequent types of disturbance of special sense observed. While gunbarrel fields of vision are rather typical of hysteria, the most common sort of visual disturbance consists in a diminution of central rather than of peripheral vision. This defect, like all the other disturbances associated with the psychoneuroses, is very variable and responds well to suggestion. Disturbances of taste and hearing are rarely encountered.

Psychoneurotic persons, particularly children and young adults, are almost invariably susceptible to suggestion to an exaggerated degree. In the presence of pain, fear, and so forth, this exaggeration is markedly increased and the possibility of a development of hysteria becomes considerably enhanced. Unfortunately, physicians have often been the source of this ill-fated type of suggestion, and have initiated the development of an enormous number of functional states. Medical students and the profession at large have not been sufficiently impressed with the necessity of observing the greatest care when expressing opinions and doubts.

CASE 5—A girl, age 18 years, came to the clinic July 29, 1919, because of curvature of the spine, and eye trouble. Nine years before she had fallen and bruised her back. Following the fall, she had developed a severe headache and a slight visual disturbance. She was taken to Chicago, where a doctor had treated her for several months, after explaining to her and her parents that her condition was serious. About one year after the fall, curvature of the spine was first observed. A plaster



cast was advised, but not applied. Instead, the patient was confined to bed for three years, and lost much power in her lower extremities. She had had severe migrainous headaches before the injury, which continued to appear at regular intervals. She also had complained of vertigo, dyspnea, diplopia, and lachrimation.

On physical examination at the clinic she was essentially normal. Her vision was 6/5 in both eyes; the pupils, pupillary reflexes, visual fields and fundi were normal. Neurologic examination revealed marked but variable weakness in all extremities, particularly the lower limbs, and anesthesia over both lower extremities for all qualities of sensation. When the patient was forced to stand erect there was definite contraction in the muscles of both lower extremities. The tendon reflexes were normal, the sensory and motor findings exceedingly variable. The response of the muscles of the legs, thighs, and back to faradic stimulation was normal. The diagnosis was hysteria and migraine. No therapeutic measures, other than explanation of the situation, were being offered this type of patient at that time.

Two years after her visit to the clinic she was carried up Miracle Mountain, California, by a chiropractor. According to the Los Angeles Record, "On the night of Saturday, June 19, 1921, the girl went under the healer's hands. Thousands saw her get up and walk."

*Comment*—The patient suffered from migraine. Her physicians had emphasized the seriousness of her condition on a number of occasions, and had finally suggested the application of a cast. She was an ideal case for a miraculous cure. Contractures are one of the forms of motor disability not infrequently met with. They are generally characteristic and occur after pain or paralysis. They may be limited to one extremity, or to one foot or hand. The tension of the muscles is increased by any attempt to overcome the contraction, and efforts at approximation of the points of origin and of insertion of a given muscle do not aid relaxation. Contractures in the upper extremity tend to be of the flexion type; those of the lower extremity, of the extension type. One of the sequela of contracture is hysterical scoliosis. It is characterized by the absence of torsion of the vertebral bodies and by its tendency to appear and disappear on different movements of the body. The patient in Case 5 had a rather typical hysterical scoliosis. Her emotional instability is evident from the course of her complaint and the manner of cure. Case 6 resembles Case 5, but is a purer example of the influence of pain and suggestion on a patient handicapped by a congenitally high-strung nervous system.

*CASE 6*—A girl, age 17 years, came to the clinic August 22, 1922, complaining of pain and paralysis in the right foot and ankle. Six months before she had tripped on the school stairs and sprained her right ankle. The doctor who was called shook her foot roughly and told her to use it. Following this manipulation the foot became extremely painful and she could not move it. Subsequently, another physician applied a cast for three weeks, with no improvement. A diagnosis of tuberculosis of the ankle was made and the advisability of operation discussed. Objectively, the only findings were loss of voluntary movement of the right leg and foot, "exquisite tenderness," and emotional lability.

*Comment*—The patient's father had died recently, leaving a large family without resources. Her mother was a "crepe-hanger." The patient was much hurt by lack of sympathy on the part of the first physician; she was greatly impressed by the cast and the prospect of an operation; and she recovered on persuasion and after the use of faradism.

Parker has recently described a miscellaneous

group of cases under the head of "Unusual Forms of Pain in the Area of the Fifth Nerve." Many of the patients had been subjected to one or more operations without relief. A considerable proportion of these cases were obviously functional in origin. Surgery was not only uniformly unsuccessful in relieving the distress, but actually aggravated the condition.

*CASE 7*—A married woman, age 34 years, came to the clinic January 20, 1922, complaining of pain in the right side of the face and abdomen, of six years' duration. The pain in the face had commenced six months after an operation for shortening of the round ligaments. At the onset, it was anterior to the right ear and radiated toward the nose and occasionally toward the temple. The discomfort had become constant, and varied from a mild to an excruciatingly severe type of gnawing pain. She had not had pain while in Los Angeles and Rochester. The abdominal pain was dull and aching. She did no "drudgery, like sweeping, and so forth," but rode around during the day and worried at night.

Several days after coming to the clinic the patient confided that she was convinced the pain in the face and the right side of the abdomen were related. She had been told by a physician that this was true, and that she would need an operation. On this occasion she said that the sharp pain in her face occurred only during sexual intercourse with her husband, and that she was normal when not in his company. She desired hysterectomy in order to rid herself of further sexual responsibility. There was a strong family history of migraine, but although migraine may have been a factor, there was a marked hysterical embellishment. The pain did not resemble that described as characteristic of the syndrome of the sphenopalatine ganglion.

*Comment*—Several examples of disturbance of motility of a neurotic character have already been given. Rhythmic stereotyped movements are often observed and are very difficult to differentiate from myoclonus of the type observed rather frequently in cases of encephalitis or, less commonly, paramyoclonus multiplex. Tremors are not at all uncommon, and are often quite obviously functional. The vibration is generally very rapid, and the amplitude rather small. At times there is added to this type of tremor a rhythmic variation, so that after a certain number of fine movements there may follow a smaller number of considerably larger size. With tremor there may be considerable dyspraxia.

*CASE 8*—A married woman, age 34 years, came to the clinic July 13, 1923, complaining of pain and inability to use the right arm and fingers, and of pain in the right side of the abdomen, the right hip, both knees, and the spine. Five years before, circumstances had compelled her to take a course in stenography. A dull pain then appeared in the right hand, causing it to draw away from its task involuntarily on every effort to use it. She felt as though her fingers were being torn out at the roots. She became nervous and commenced to have spells of crying, shaking, universal numbness, and rigidity with loss of speech and movement, but retention of hearing. Because of the abdominal pain she was given hypodermic injections of morphin almost daily for a period of two years. Three and one-half years before, tonsillectomy had been performed without relief. Objectively, the examination was negative, except for obviously hysterical dyspraxia in the use of the right hand, shifting areas of tenderness, and excessive emotional lability.

The patient had married first at the age of 16 years; at the age of 18 she gave birth to a daughter, and at the age of 20 her husband was drowned. She married a second time, this time a young man whom she loved, but whom she left because he did not support her. (This marriage was kept secret until discovered through a dream the patient related.) The stenographic course was taken

at the age of 29. She could not earn her living and failed at five positions. She then married a wealthy bachelor, age 56 years, for whom she did not care. This man was extremely jealous. He encouraged the patient's undisciplined daughter to marry a shiftless wretch many years her senior. A very common dream reveals the patient walking along the street and being accosted by a very handsome young man (her second husband), who asks for her telephone number. At this moment a horrible old man, all covered with long black hair, jerks her away and threatens to arrest her for talking to a stranger. (The striking thing about her present husband is his "beautiful long black hair.") She declares her innocence.

*Comment*—The patient was a constitutional, biologic inferior who had made the usual early marriage. Her third marriage was made in order to provide a home for her daughter. Data concerning her second marriage, which was a "love match," was very difficult to elicit and was associated with marked emotional disturbance. The conflict of duty toward her daughter and sorrow for herself resolved itself into the dyspraxia and the figurative dreams which solved her problem. This woman presented definite evidence of emotional lability, a dyspraxia totally unlike those observed in organic disease, and the usual variability of changes in sensation so characteristic of such patients.

The conception that sexuality lies at the bottom of all hysteria has not been generally accepted. Like all other functions of the body, however, it plays a part in the development of a certain percentage of hysterical cases. The use of free association and interpretation, as advised by Freud, for psychoanalysis and therapeutics has not been so satisfactory in our hands that we feel that it should be universally used. On the contrary, the possibilities of doing harm would seem to nullify its advantages. Of late there has been considerable criticism of psychoanalysis on the basis that it does not constitute a scientific method when subjected to the ordinary canons of scientific criticism. While most authorities accept Freud's concepts of conflict and of repression, they are skeptical concerning his interpretation. However, any discussion of the psychoneuroses at this time would be incomplete without reference to this method.

There is a group of hysterical patients who solve all difficulties by going to sleep (catalepsy), or by running away from care (somniaambulism). During such an attack the patient is able to remember all previous attacks. In the intervals, however, there is characteristically a complete loss of memory of the attacks. There is a doubling of personality with a shutting off from the external world of the second nature. These patients may show a crepuscular or twilight state (*Dämmerzustände*) during which they may act as children; at other times they may depart on long journeys without apparent motive.

CASE 9—A man, age 26 years, came to the clinic September 21, 1922, complaining of periods of loss of memory. On the completion of his second year of high school work he had started to work in an ice-cream factory, and had subsequently become a soda dispenser. He continued this work until he was drafted in 1918. In the army he served in the Quartermaster store in Atlanta, Georgia, from July, 1918, to January, 1919. He made many friends in the service, carefully avoided promotion, and had a very pleasant time, without worry or responsibility. During the entire year of 1919 he worked on a salary basis at a milk station. In 1920 he started a milk depot of his own with borrowed capital. He prospered,

paid up his loan, and in 1921 expanded his business into a creamery. In 1921 one of his employees started a competitive concern, sold milk cheaper and definitely reduced the patient's profits. In order to install labor-saving machinery, the patient assumed new financial obligations. During 1922 the business rivalry became very annoying, and as a result of his losses and debts he became very much worried and suffered with spells of despondency. Of necessity his work was hard and tedious. He was unable to attend any social functions, or to do anything except work. According to his wife, he had shown no unusual traits of character except an inclination to be moody, absent-minded, and somewhat deficient in the "money sense." His wife considered him an ideal husband, but a poor business man. The patient denied any prodromal phenomena, but his wife had noticed that he was worried, absent-minded, and inclined to day-dream prior to his first "spell," marked by departure from home on the morning of February 12, 1922. After he had gone she had discovered an incoherent letter, stating that he was going to inspect "a good farming and milk country." One morning, about two months later, he awoke in bed in a rooming-house in Atlanta, Georgia, found he had a roommate, asked where he was, and who the roommate might be. He went outside after dressing, and drove off hastily in his car for home. While sending a wire at the next town, he discovered a check in his pocket for \$25, drawn on an Atlanta drug-store, which he concluded was for services rendered as a "soda squirt." On his way home he was told that he had used his car on a southern trip as a taxi for a few days in order to make money. He arrived home a chastened man, and with no recollection of his experiences in Atlanta. He had made absolutely no preparations for the flight, took only \$50 when he could have taken much more, and was neat and clean when he "came to" in Georgia. During his absence he had sent several rambling letters to his mother, couched in terms of the past and dealing with his sweetheart (then his wife) and a doctor whom he had known years before. His mother answered him, told him who he was, "and where to get off at." He replied rather incoherently that he was glad to learn all this, but he did not return, gave no address, and had all letters sent to general delivery.

On his return he seemed to be glad to be home and went into the old business with new energy. In a short time he became despondent, and complained of being tired and dizzy. Four months after his return he came to breakfast one morning more or less dull and absent-minded. His wife suspected he might make a new departure, which he promptly proceeded to do after having purchased a new pair of shoes (although he had many pairs at home), and taking a suitcase containing a baseball suit. This time he awoke in the mountains of Montana. His car had been taken to pieces, and he was grease and dirt from head to foot. He had attempted to mend a rear axle and had fallen asleep when he failed. On waking he walked to a small town nearby, took a train to Spokane, purchased new parts, returned, and mended the car. While in Spokane he wrote to his wife. When he reached home, he was very crestfallen. He did not worry about the period of flight, and said that he remembered nothing about it.

Physical examination was negative, as were all the laboratory data.

*Comment*—The patient was a poor business man who had a pert, domineering wife. Under stress, the desire for his previous carefree existence released him from his onerous responsibilities.

Fugues demonstrate lack of self-restraint and an ostrich-like way of solving problems. The differential diagnosis in cases of this sort lies between epilepsy and hysteria. Until comparatively recently it was commonly believed that all fugues were epileptic in origin. It has been shown, however, that epileptic fugues, or flights, are never of more than twenty-four hours' duration. Also, it is never possible by hypnosis or other methods to establish what took place during the amnesia. On the other hand,



under the influence of hypnotism, patients with hysterical fugues are frequently able to recall their actions. Hysterical subjects tend to return to their old haunts, habits, and occupations. Their flights may be prolonged.

Any of the muscles under voluntary control may be attacked by hysterical spasms. The seizures may



Fig. 1. Note the paralytic condition of the muscles of the left shoulder girdle (February 27, 1924).

be divided into several phases, an aura, an epileptoid period, and a period of plastic passionate gestures, and lethargy. The duration of such attacks varies in different patients, and in the same patient from time to time.

CASE 10—A girl, age 18 years, came to the clinic February 18, 1924, because of paralysis in the left arm and fainting spells. Two years before she had been thrown to the ground, striking her left shoulder and the left side of the head. The scapula flared outward and motion was restricted at the shoulder joint (Fig. 1). One week after the fall she began to complain of a sensation of numbness in the fingers of the left hand and of progressive weakness in the hand. Following a number of unsuccessful attempts to reduce what was considered a dislocation of the shoulder, and after a number of chiropractic adjustments, the numbness and paralysis spread upward, extending to the wrist, elbow, arm, shoulder, neck, and the left side of the head and face, and downward onto the chest. From the time of the fall she had been "nervous," and the vision of the left eye had become somewhat impaired. In January, 1923, she was told that there was no further hope of recovery, that the nerves had been torn loose from points of exit from the spinal cord. Since February, 1923, she had been having "spells" at intervals of one day to one week, during which she would become very nervous, shake all over, and then "drop off to sleep" for from three to five minutes. During this time she was quiet, pale, and relaxed. If she was sitting in a chair she would fall back, but maintain the sitting position. On awaking she felt perfectly well and between attacks enjoyed life. Six months before coming to the clinic, she began to feel a "sore spot" over the left parietal bone and had a constant gripping pain in that area. This did not deter her, however, from physical exertion. Four weeks before, the vision in her left eye had become so poor as to permit recognition only of shadows of objects. Three weeks before, the pain in the left parietal region had become very severe and she had developed pain behind the left eyeball. Following such pain she developed severe and frequent "spells," during which the pain over the parietal area would become very severe; the right arm would be raised, and the side of the head would be grasped with

the hand. She would then become unconscious for a period varying from a few minutes to an hour. During this time she would lie quietly, with scarcely visible respiratory movements. The right arm or leg would sometimes be moved. She then would begin to gulp and to produce a choking sound, associated with deep respiratory movements, would jump up, strike violently, bite, and run about, wildly exhibiting "supernatural strength." After two or three minutes she would fall over, relaxed and pale, and gradually awaken. Following this she generally fell asleep, and an hour later might be up laughing and talking, and have no memory of anything that had transpired. She had had about fourteen such attacks, none of which was associated with incontinence or biting of the tongue or cheek. During the last year she had had trouble in swallowing, and at times had ejected food through her nose.

Physical examination was essentially negative. Neurologic examination revealed complete paralysis of the left upper extremity, and over the left half of the trunk, down to a line running horizontally forward from the seventh dorsal vertebra. All muscles responded promptly to faradic and galvanic types of current. The tendon reflexes were normal. Under the influence of explanation, persuasion, and faradism, she made a complete recovery (Fig. 2).

*Comment*—On the occasion of injury the patient was treated by a young, unmarried physician, who had impressed her with the seriousness of her condition. She was enamored of him, but he did not reciprocate her affections. Her disability provided justification for repeated visits at his office. During one attempt to reduce what he considered a dislocated shoulder, the physician had used the rather dramatic and time-honored method of putting his foot in the patient's axilla and pulling on the extremity. The anesthesia was not comparable to that associated in our minds with injuries to the brachial plexus. The spasms, which were of variable duration, were complete. The aura consisted in the parietal pain and the elevation of the arm. During the epileptoid period the patient was apparently un-



Fig. 2. April 2, 1924. The function of the muscles of the left shoulder girdle has returned.

conscious. Suddenly there would be an upheaval and a violent outburst of grotesque movements of all the extremities (the period of passionate gestures), followed by a period of lethargy and the gradual resumption of normal consciousness.

Case 11 illustrates the same phenomena, though less completely.

CASE 11—A married woman, age 33 years, came to the clinic September 5, 1922, complaining of convulsions, the first of which had occurred during the

spring of 1921. While telephoning her mother, she had felt a rushing sensation which spread upward from her toes to her shoulders; she lay down and was unconscious for a few moments. On regaining consciousness, she went back to the telephone. During 1921 she had had similar attacks frequently, characterized by the rushing sensation, and by quietly slipping to the floor. She never had an attack in a public place. A sudden fright, pain or headache would precipitate an attack. In April, 1922, just before having her teeth extracted, she began to "pound the air" in her spells, to kick vigorously, to grind her teeth, to bite the pillows and bed-clothes. On one occasion she bit her arm until it bled. During these spells she would lie down and groan for about half an hour. Two weeks before examination she had had an attack of pain, associated with blindness, that started in her head, worked down to her feet, and then back up again to her head. She had had almost daily supra-orbital headache, associated with dizzy spells, momentary unsteadiness, and blindness, for the three weeks before coming to Rochester.

Physical and neurologic examinations were negative. Her vision was 6/6 in both eyes; the fundi were normal. Without having seen a convulsion, it was somewhat difficult to determine the nature of the attacks. There were few elements of genuine epilepsy, while there were many elements characteristic of higher associative movements: grinding of teeth, biting, striking with arms, and so forth. There was no cyanosis, clonus, injuries, incontinence, confusion, or deterioration. She had had a miscarriage, associated with much suffering, exhibited a marked fear of pregnancy, had practiced coitus interruptus, and, in spite of apparent potency, her marriage was sterile.

*Comment*—In the patient's subconscious mind there was the natural desire for a child, which was in conflict with the fear of pregnancy. The convulsive seizures constituted a defense mechanism and a justification for the course she was following.

Incomplete spasms or convulsive seizures are much more frequent than complete ones. The movements produced are excessive, and are of a type such as are under control of the will. These patients, as a rule, are not unconscious, and show no disturbance of the pupillary reactions to light. While tendon reflexes may be lost or diminished temporarily, the corneal and pupillary reflexes are rarely disturbed as a result of functional disease.

CASE 12—A man, age 21 years, a farmer, came to the clinic September 14, 1920, complaining of "peculiar attacks" precipitated by sudden movements, to which he had been subject since 8 years of age. Tying a string above his knee and "stopping the circulation" sufficed to prevent the onset of attacks. The attacks always started in the legs and spread upward. All muscle control was lost; there was frequent irregular jerking of the extremities, but no loss of consciousness or disturbance of the special senses. Sometimes the attacks started in one leg, and in this event frequently involved only that side of the body. The patient also described a peculiar numb, damp feeling in both legs which was present all the time, but worse in cold weather. There was no incontinence or biting of the tongue associated with the attack. He had masturbated about three times a week for many years.

On examination the patient proved to be emotional; the laboratory data and special examinations were negative. Neurologic examination was objectively negative in every detail. During examination an attack occurred; he walked to an open place on the floor, his leg twisted, he sank to the floor, his eyes closed, and he convulsed in a generalized atheto-choreic manner. The diagnosis was hysteria. After proper explanation, and under the influence of faradism, it became possible for him to perform rapid movements without bringing on an attack.

*Comment*—Life had entailed very little exertion for the patient, due to the immediate onset of a convulsion when rapid or forceful movements were attempted. He liked the situation.

The time would seem to be past when it was necessary to make a diagnosis of psychoneurosis by exclusion. Hysterical patients exhibit exaggerated emotional excitability, marked variability in their complaints and findings, and remarkable non-conformity, in their symptoms and signs, to the limitations imposed by the accepted conceptions of anatomy, physiology, and pathology. They are no less worthy of a complete history and thorough physical examination than other groups of patients. Either they must look to the medical profession for scientific advice, persuasion, and re-education, or resort to the "Miracle Man" of "Miracle Mountain."

#### DISCUSSION

JOHN R. LLEWELLYN, M. D. (Walker Bank Building, Salt Lake City, Utah)—Doctor Doyle's selection of the subject, "The Recognition of Psychoneuroses," is timely indeed. So often nowadays, unless we can find some body ailment which can be measured with one of our instruments of precision or find a definite indication for surgery, the patient is patted on the back and told to go home and forget it.

Only recently a sufferer from one of the neuroses remarked to a sympathetic consultant, "Well, there is one thing I want to thank you for. You didn't take my blood pressure." This patient had been told too often to go home and forget it. He had a definite problem, the solution of which was well under way when the consultant recognized the man's difficulty, and by a series of sympathetic conversations enabled the patient to take definite stock of himself and get started on the road to happiness and success.

These patients may or may not have a physical basis for their peculiar mental states. The return of dissatisfied surgical patients frequently means the mental side of the case has not been properly appraised.

Doyle in his excellent paper cites a number of cases which illustrate the rather common incidence of the neuroses, and we hope he will return to us soon with the result of his experience in this and allied subjects.

DOCTOR DOYLE (closing)—Modern medical teaching makes little provision for instruction in psychiatry. What little information is offered deals with Kraepelin's conceptions of the psychoses. The psychoneuroses receive almost no attention. The recent development of the movement for mental hygiene represents the first step in an effort to popularize this much-needed information for the laity and the medical profession.

There is much searching for goiters these days and much piling and compiling of statistics as to their frequency. From the nature of these statistics and from general observation we often wonder whether these students of goiter are always sure of a goiter when they see it, or whether any of us know just whether or when a goiter exists. Dr. A. S. Jackson of Madison, Wisconsin, calls attention in the Boston Medical and Surgical Journal of December 17, 1925, to the danger of adenomatous goiter. He says: "Although I have advocated and am continuing to give iodine in definite amounts in the prophylaxis and treatment of early colloid goiter, *I am not too well satisfied with my results.* I have one series of at least one hundred cases in which iodine has been administered over a period of two years with little or no appreciable effect." However, "the laity as well as the profession should realize that any adult who has a goiter and takes iodine does so with considerable risk. I believe that iodine should be dispensed only on the prescription of a physician."—Medical Journal and Record, March 17, 1926.

The number of new books printed last year fell off by 26 per cent from the total of new titles in 1924. The number of book sales, however, jumped up 12 per cent. . . . A literary magazine places the number of short stories published in American magazines last year at over 20,000.—The Outlook.



## ETIOLOGY OF ECLAMPSIA

By P. O. SUNDIN \*

*A review of the theories and conclusions of recent writers and investigators. The fact is emphasized that the cause of eclampsia is not yet definitely determined, but the consensus of opinion is that it is a general infection.*

Discussion by G. Carl H. McPheeters, Fresno; J. W. Sherrick, Oakland; A. B. Spalding, San Francisco.

AFTER carefully going over the recent literature on this subject, the reference to eclampsia as "the disease of theories" seems appropriate. That the cause is some sort of a toxin is quite generally stated, but of the nature and origin of the toxin we are still uninformed.

Supporting the toxic theory there is an abundance of evidence that focal infections are important factors in early abortions, toxemias of pregnancy, and eclampsia.

It was once supposed that the kidneys were the primary organs affected and that eclampsia, like uremia, had its origin here. Some now believe that there may be two forms of eclampsia—one known as the renal type, in which the kidney is the primary seat of the disease and the liver secondarily involved, and the second known as the hepatic type, in which involvement of the kidney is secondary to that of the liver.

Some endocrinologists recognize thyroid hypoadactivity and insufficient secretion to take care of the increased metabolism in the liver as probably productive of eclampsia, a theory supported by the fact that patients with hyperthyroidism are made worse by pregnancy.

The symptoms of eclampsia, particularly the usual high fever in fatal cases, suggest systemic infection.

Kellogg has recently shown that patients suffering from toxemia of pregnancy are very prone to develop septicemia. In his experience, 14 per cent of toxemics without convulsions and 25 per cent of toxemics with convulsions developed septicemia, irrespective of the method of delivery.

Kosmak in his recent review on the pathology of toxemias has shown that the characteristic lesions in many different organs are minute hemorrhages. He says: "Eclampsia characterized by local cell degeneration and necrosis, as a result of thrombosis of the small vessels, is represented by eclampsia with or without convulsions. Subcapsular hemorrhages are common. The capillary vessels of the kidney show stasis, and many contain actual thrombi. Infarcts are present in the kidney, and are due to the migration of emboli from other organs.

"Although kidneys and liver present the most frequent and characteristic pathological changes at autopsy, almost all of the organs may be more or less involved. Hemorrhages may take place into the lungs, pleura, pericardium, cranial cavity and brain, gastric mucosa, peritoneum and skin." Polak

reports pathological renal changes in 98 per cent of 139 autopsies of eclampsia. Young and Miller have come to the conclusion that infarcts in the placenta is the causative factor. Also that in a definite number of instances early degeneration of a piece of placenta whose circulation has been interfered with may be the cause. The final conclusion of Young and Miller and some other investigators is that "the white placental infarct is the end-result of a hemorrhagic lesion by coagulation necrosis, the condition is often multiple and may repeat in the same placenta. There is clinical and histological evidence that the primary lesion is the result of hematogenous infection, generally found to be the teeth and tonsils. In other words, chronic sepsis is the primary cause."

Fritz Sachweh emphasizes the fact that during the second half of pregnancy nitrogen retention and hyperacidity of the blood are present, so as to suggest a change in the protein metabolism, i. e., protein ingestion in the food is not oxidized to the same degree as in non-pregnant women. Fats also are oxidized only to a limited degree, whereas the carbohydrates are used up completely.

Considering these facts, he suggested the hypothesis that the development of eclampsia is favored by an overabundance of meat and fat in the diet toward the end of pregnancy. Experiences during the war demonstrated that the best prophylaxis of eclampsia consists in restricting meat during pregnancy.

From an endocrinological point of view, Masaglia's study of the hypofunction of the parathyroids in cats and dogs seems to prove that substances commonly neutralized by parathyroid action reach the kidneys unchanged and produce renal injury, ending in nervous derangements, and even tetany. He comes to the conclusion that the parathyroids assist the liver in neutralizing intestinal poisons, especially those which come from a meat diet.

John E. Talbot has shown, not only that the placenta infarct is the result of hematogenous infection of the placenta site, but also that the foci of chronic septic infection forms the basis of much of the pathology of toxemias. His conception is that the processes involved are the same as those involved in the production of all infectious diseases. He suggests that in pregnancy the potential power of the whole metabolic system is under a strain, whereby derangement of the necessary balance between the organs of metabolism is more readily reflected, and symptoms are found which are common only in the late results of a more chronic disease process, such as chronic nephritis. He adds: "It is possible that there may be hemorrhagic lesions in both the placental site and other organs, and scattered throughout the body on the principle of hematogenous infections." He is convinced that the toxemia of pregnancy is almost never the result of a single acute infection of short duration, and regards its conception sufficiently broad to embrace the many different types. This conception, that the disease is a systemic infection, is consistent, not only with the pathology, but also with the clinical picture.

In reviewing the observations of James J. Gilmore we find that, in 29 pregnant women in whom

\*P. O. Sundin (H. W. Hellman Building, Los Angeles). M. D. University of Southern California and University of California College of Medicine, 1907. Practice limited to Obstetrics and Gynecology. Hospital connections: Los Angeles General Hospital, Hollywood Hospital, California Lutheran Hospital, Florence Crittenton Hospital, City Maternity and Los Angeles Department University California Medical School Clinics.

anemia could not be otherwise explained, 26 had definite pus pockets. In sixty-six cases of early toxemia, with nausea and vomiting, 31 patients had tonsillar infection, 16 had apical abscesses, and 6 had both of these conditions. In other words, 80 per cent had a focus of infection. And again, in a series of fifty-seven cases of abortion and miscarriages unaccounted for by any other cause, 27 patients were found to have infected tonsils, 7 infected teeth, 1 had both types of infection, 1 an acute sinus infection. Dead fetus in uterus was found nine times when the condition could not be accounted for, save for a blood-born infection. Of these 8 had diseased tonsils or teeth, and 3 had both. In two instances a positive culture was obtained from the amniotic fluid, and 1 from the fetal heart blood. In forty-seven cases of pyelitis observed during pregnancy and puerperium, 27 patients had infected tonsils, 6 had abscessed teeth, 7 had both. In a total of sixty-one cases showing increased blood pressure with albumin and casts, but without toxic symptoms, 70 per cent had a definite focus of infection.

I am satisfied that if we guard our patient well by insisting upon bi-weekly, and in the last month of pregnancy, weekly observation, noting at these visits the condition of the urine, blood pressure, weight-gain, and the minor complaints, including constipation, edema, condition of the teeth and gums, as well as restriction of food intake, especially meat and foods high in protein, the number of toxic cases will be minimized.

Well-kept records will show a gradual rise in the blood pressure, for instance, before edema, abdominal distress, slight headache, nervousness, and insomnia are evident enough to attract the patient's attention to the general condition. Certainly, we should pay attention to the condition of the teeth, chronic local infection, and leucorrhea.

We know that the doctor who watches his patient and transmits his knowledge to the prospective mother, thereby decreases mortality and "convulsions out of a clear sky." We should not wait until the last weeks of pregnancy to obtain the patient's past history. A patient with a history of chronic nephritis certainly cannot stand the strain of pregnancy as well as one free from past ailments.

#### CONCLUSIONS

The cause of toxemia of pregnancy is still undetermined. Clinically and pathologically, the evidences are that it is an infection. Chronic foci of infection are to be looked upon with suspicion. Excess protein intake and improper elimination favor this symptom complex.

#### DISCUSSION

G. CARL H. MCPHEETERS, M. D. (Mattei Building, Fresno, California)—We are indebted to Dr. Sundin for a clear résumé of our ideas of the etiology of eclampsia.

In commenting upon the causes which seem to lie back of an eclamptic condition, I desire to emphasize the fact that most such patients are poorly prepared for the responsibilities of pregnancy. They are anemic, overweight, under weight, neurotic, poorly developed, afflicted with serious menstrual irregularities, handicapped by focal infections, including those of the urinary tract; or some combination of these conditions before pregnancy began. These facts support another argument for prenuptial ex-

aminations and corrections of conditions calculated to interfere with motherhood of all women before marriage, or at least before pregnancy wherever possible.

I specially like the emphasis Sundin places upon thorough physical examination of pregnant women, and upon the office visits which the patient should make every week or two weeks for observation and advice. Most patients co-operate well when we explain the what, why and how of the road they must travel. Very few patients indeed develop eclampsia who are under close, careful observation as outlined by the author. I believe eclampsia is a complication of pregnancy due to infection, and the toxins produced by such infection.

J. W. SHERRICK, M. D. (350 Twenty-ninth Street, Oakland, California)—Careful consideration of the etiology of eclampsia results in a number of interesting theories, some of which are rather bizarre, others important enough to warrant further investigation. There are so many factors involved, with resultant strain upon the patient's physical condition and upon her nervous system. The mother's metabolism is so extremely altered by this physio-pathological process of pregnancy that it seems unwise to attempt to explain the different manifestations on the basis of any one of the theories advanced. Every obstetrician appreciates the added strain that foci of infection throws upon the organism and the importance of carefully directed and prolonged prenatal care, eliminating every pathological factor and influence possible. But there are so many conditions in our complex life that militate against a normal pregnancy and leave the patient anemic, under par physically with little physical and nervous system reserve, that I do not feel that the real cause of eclampsia can be ascribed to infection. Rather, it seems just one of the more important associated factors that serve to throw the balance against the defense powers of the maternal organism. I do want to emphasize the absolute necessity of anticipating and dealing with these foci of infection, but I feel that there is still some unknown toxic element working through these more tangible influences.

A. B. SPALDING, M. D. (Stanford Hospital, San Francisco)—Doctor Sundin has reviewed in a very interesting way some of the theories as to the causation of toxemia of pregnancy. There seems to be an association of focal infections to toxemia, but very little has been brought out to prove that these focal infections do more than influence the prognosis of the condition. We are still ignorant as to the primary cause.

It seems to me that more progress could be expected from a well-organized study of the post-toxic patient. This is a very difficult line of research, because the patients so frequently fail to co-operate.

From our limited experience at Stanford Medical School, the test for renal function devised by Dr. Thomas Addis seems to give a fairly good prognostic indication as to the probability of toxemia in future pregnancies. I believe before the toxic patient deliberately attempts a succeeding pregnancy she should at least have a thorough study of her kidney function and, if possible, a more difficult study of her liver function. In the non-pregnant state it is undoubtedly wise to remove from the patient all sources of focal infection.

DOCTOR SUNDIN (closing)—I wish to thank Drs. Spalding, McPheeters, and Sherrick for their interesting discussion of my paper. Apparently, all agree that, since the cause is unknown, prenatal care is our best weapon of defense for the present. We hope that the question of etiology of eclampsia will soon be settled.

Dr. Charles M. Wharton, in charge of health and physical education at the University of Pennsylvania, thinks that the "daily dozen" and reducing and starvation diets are downright "assaults" on health. "The latest fad in the name of physical culture, the early morning exercise by radio, is bad," Wharton said recently, "as it selects the worst time of the day for heavy exercise. Someone should call a halt against this wild scramble for health by unnatural means," he added. "This indiscriminate adoption of severe physical training destroys the health of more people than it improves."—San Francisco Argonaut, April 1, 1926.



## - BEDSIDE MEDICINE FOR BEDSIDE DOCTORS -

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects and discussions invited. Useful extracts from letters will be published.

### THE PRACTICABILITY OF RADIOLOGICAL VISIBILITY OF THE GALL-BLADDER: ITS AVAILABILITY, INDICATIONS AND VALUES TO THE FAMILY DOCTOR

**The Editor**—That improved radiologic technique gives evidence of value in the diagnosis of gall-bladder trouble seems amply demonstrated. Many careful radiologists are seriously engaged in efforts to still further improve and simplify current procedures, and the growing literature seems to imply progress.

The tremendous value to thousands of patients of thus adding to our diagnostic procedures positive evidence where conclusions formerly were perforce arrived at by indirection is, of course, obvious. But this is not enough: the technique must be simplified until it is far more widely available than now, and the costs of the effort must be reduced before this valuable contribution can be made available to or paid for by the average patient.

That the vast majority of physicians have so far taken little interest in this live subject, is indicated by the fact that, of the many who were invited to discuss the subject here, all except those well known for their radiologic experiences declined to take part in the discussion, usually giving as reasons that they knew nothing about it or had had no experience.

Well-equipped radiological laboratories and competent radiologists are well distributed in California, and with the clear résumé of our knowledge of the value of radiologic methods here set forth, it is likely that the interest of physicians may become more general.

The invitation for suggestions for subjects for *Bedside Medicine for the Bedside Doctor* is a standing one.

**W. W. Boardman\*** (350 Post Street, San Francisco) — The realization that many of the gastro-intestinal upsets seen in routine clinical work and so easily dismissed as nervous indigestion, flatulent dyspepsia, etc., are in fact the reflex manifestations of chronic gall-bladder disease, has led to efforts to develop special means of arriving at an early and accurate diagnosis of such disease. Among the various measures proposed, we may mention, in passing, the careful analysis of the inaugural symptoms and signs, the Lyons' method of studying the duodenal content, and the various liver function tests, but we wish at this time to consider only the radiographic procedures—their practicability, availability, indications, and value.

A complete radiographic study of the gall-bladder should include (1) several films of the gall-bladder region, usually after thorough emptying of the gastro-intestinal tract, followed by (2) a study of the gall-bladder region we may discover shadows of tetraiodophenolphthalein, either by mouth or intravenously, and (3) supplemented by a careful barium-meal study of the entire gastro-intestinal tract.

From such an examination certain positive and negative evidence may be derived. In the first films of the gall-bladder region, we may discover shadows characteristic or suggestive of gall-stones, or we may

find a more or less definite shadow of the gall-bladder. The significance of this latter finding is open to some question, although it has been thought by some to indicate a pathological gall-bladder.

Our interest at present is especially fixed on the tetraiodophenolphthalein test. This consists of the oral or intravenous administration of tetraiodophenolphthalein which is excreted in the bile, is normally concentrated in the gall-bladder, and, owing to the iodine ion which it contains, the density of the gall-bladder contents becomes sufficient to cast beautiful shadows in the radiograph. Films are taken at certain stated intervals after the administration of the dye, and then compared. From these films we are able to study the filling, concentrating function, and emptying of the gall-bladder, as well as the size, shape, position, outline and density of the shadows, and its relationship to other adjacent shadows. Following such a test we may find three results: (1) A perfectly normal reaction, which indicates a normally functioning biliary system; (2) an absolute failure to visualize the gall-bladder, which indicates marked disturbance in function, in that the dye failed to enter the gall-bladder in appreciable quantities; or (3) an incomplete visualization, which indicates some disturbance in biliary tract function, in that the gall-bladder did not normally fill or normally concentrate or normally empty.

In interpreting these findings it must be kept in mind that the test is primarily one of function. It is therefore conceivable that a mildly diseased biliary tract may show normal function and that a normal tract, because of various reflex disturbances, may show abnormal function. However, the evidence so far at hand seems to indicate that a normal reaction excludes gross pathological changes and that a partial or complete failure of visualization indicates mild or severe pathological changes. These changes will usually be found in the cystic duct or gall-bladder, and may consist of obstructions of the duct, thickening of the gall-bladder wall, loss of epithelial lining, or a lumen filled with stones. It must be emphasized that an incomplete visualization after the oral administration may result from faulty intestinal absorption rather than from disturbed biliary tract function. Little importance can therefore be attached to such a test, unless it be repeated by the intravenous method.

The oral method of administration may be used routinely for ambulatory patients, although it is occasionally followed by mild reactions, consisting of nausea and vomiting. The intravenous method requires careful preparation and technique, and should preferably be a hospital procedure. It must be kept in mind that the intravenous administration of any of these foreign dyes is always attended with a certain danger, and, although as yet no reports of serious consequences after the use of this

\* **W. W. Boardman** (350 Post Street, San Francisco). M. D. Cooper Medical College, 1909. Assistant Phipps Dispensary, Johns Hopkins Hospital, 1910; Assistant in Actinography and Externe in Gynecology, 1911; Lieutenant U. S. N. R. F. At Stanford Medical School since 1912.

dye have appeared, it is not a procedure to be used indiscriminately in office practice. The reactions so far encountered have been few in number, mild, and of short duration, but nevertheless I would advise hospitalization until further experience has demonstrated its safety as an office procedure.

Finally, the routine barium-meal study will frequently show evidence of pressure or adhesion, deformity of the antrum or cap, presumably the result of gall-bladder disease. Another finding of some value is a high, fixed hepatic flexure. The functional disturbances in motility are of slight diagnostic importance, but the positive demonstration of other lesions of the stomach or bowel is of great value.

From this review it is evident that we have at our disposal means of studying the size, shape, position and outline of the gall-bladder, its filling, its concentrating function and its emptying, as well as any variations in the density of its shadow. We can also, in the occasional case, definitely demonstrate gall-stone shadows, and in others strongly suspicion their presence, and we can finally demonstrate the presence of adhesions or pressure from the gall-bladder upon the antrum duodenum and hepatic flexure of the colon.

The most careful technique is necessary in obtaining this evidence, and skill, experience and conservatism are absolutely essential to a proper interpretation of the findings.

The positive and negative evidence so obtained is of the greatest diagnostic value, if carefully correlated with the evidence obtained from the history, physical examination and other special tests, so as to build up a composite picture of gall-bladder disease. Without such careful correlation, serious diagnostic and therapeutic errors may be made.

**Walter C. Alvarez** \* (Mayo Clinic, Rochester, Minnesota, formerly of San Francisco) — I have been using the Graham technic in my office for some time, but have not yet made up my mind as to its value. There is no question that it is helpful to have the gall-bladder visualized for us; and occasionally stones become apparent—stones which otherwise would not have been seen. It is helpful also to know that a particular gall-bladder does not fill with the dye, but, as is the case with all negative evidence, we cannot rely entirely upon it as a sign of disease.

I recently had a talk with Dr. Carman of the Mayo Clinic, who has probably had the largest experience of anyone with this technic. After using it on several thousand patients he has come to the conclusion that it is of distinct value in the diagnosis

of gall-bladder disease. He admits that the failure of the organ to fill does not always mean an abnormal-looking gall-bladder at operation; and he has seen many diseased gall-bladders which filled well; but on the whole he thinks that this procedure will help us a good deal.

He has found that there is no need for giving keratin or salol-coated capsules, and I have confirmed this finding. The important point made by Carman is that the bromin salt is by far the best to give by mouth, and the iodine salt is the best to give intravenously. At the Mayo Clinic they always give the bromin salt first by mouth. Some patients are nauseated; quite a few have diarrhea; and occasionally one is quite sick; but there is never anything worth worrying about. The dose is graduated according to the weight of the individual. In my office we always give the patient half a grain of codein, which he can take if he develops cramps or diarrhea.

We have found that, with an office practice, it is best to give the salt about 8 o'clock in the evening. The patient then returns at 10 the next morning for a series of plates. Some physicians take plates again after eighteen and twenty-four hours, but we have not found this practice sufficiently worth while. The patient must not take breakfast in the morning, because that causes the gall-bladder to empty. If the gall-bladder shows up well, nothing more need be done; but if it should not fill, then we may give the iodine salt intravenously in order to make still surer of the findings. Actually, I have never done that because, as Dr. Boardman says, the reactions are sometimes severe, and there are a number of cases on record in which, in spite of the utmost care, the vein in the arm became thrombosed and badly inflamed. In some patients it even had to be cut out. As one such harrowing experience would be quite sufficient to cure one of using this technic, I have never had the courage to begin, and instead have waited for those with large hospital services to experiment and to get, perhaps, a better drug and a better technic. Unless they do succeed in that the procedure will always have but a limited application.

Whatever comes of it the diagnosis of gall-bladder disease will probably always depend mainly as it does now—on the careful interpretation of a well-taken history.

**H. J. Ullmann** \* (1520 Chapala, Santa Barbara)—After more than a year's experience with

\* **Walter C. Alvarez** (Mayo Clinic, Rochester, Minn.). M. D. Cooper Medical College, 1905. Graduate study: Internship San Francisco Hospital, 1905-06; Cooper College, 1906-07; Harvard Medical School, 1913. Practice limited to Internal Medicine. Previous honors and services: Assistant in Pathology, Cooper College, 1906-07; Assistant in Medicine Stanford Medical School, 1912; Research Work, Hooper Foundation, 1914-25; Assistant Professor of Research Medicine, University of California Medical School. Scientific organizations: American Physiological Society; Society Experimental Biology and Medicine; American Gastro-enterological Society; American Roentgen Ray Society; California Academy of Medicine; Associate Member American Association of Physicians; American Medical Association. Publications: "Mechanics of the Digestive Tract," 1922, and various publications in Arch. Int. Med., J. General Physiol., J. A. M. A., C. M. A., etc.

\* **H. J. Ullmann** (1520 Chapala, Santa Barbara, California). M. D. Rush Medical College, 1912; S. B. Univ. of Chicago, 1910. Graduate Study: Internship Presbyterian Hospital, Chicago. Practice limited to Radiology since 1917. Previous honors and services: World War, June 1, 1917-August 20, 1919. Discharged with rank of Major M. C. Commander Santa Barbara Post No. 49 American Legion 1924. One time Radiologist St. Joseph's and Children's Memorial Hospitals, Chicago; Assistant in Medicine, Rush Med. Col. 1914-20. Hospital connections: Radiologist Santa Barbara Cottage Hospital. Present scientific organizations: Fellow Am. College of Radiology, Member Amer. Radium Soc., Am. Roentgen Ray Soc., Radiological Soc. of North Am., Pacific Coast Roentgen Ray Soc., Southern Calif. Med. Soc., Institute of Medicine of Chicago, Am. Assoc. Advancement of Science. Present appointments: Lt. Col. Med. Res. U. S. Army. Publications: "The Application of the Sphere Gap to Roentgenotherapy," Am. Jour. Roent. Ap. 1921; "Standardization of Dosage Factors," Jour. of Rad., June, 1922; "Bacteriology of Irradiated Tonsils," Am. Jour. Roent. and Rad. Ther., May, 1923, and many others.



the use of the halogen phenolphthaleins in visualizing gall-bladders, we have come to the conclusion that it is of distinct value, but there are many points that must be borne in mind in making an interpretation of the findings. This is especially true now that the dye is usually given by mouth. We have tried nearly all the different methods—coated and uncoated capsules and pills—and have had the most constant success with a method originated by Menees, somewhat modified. Our capsules are the ordinary gelatine capsule hardened for two hours over formalin, that is, in the formalin vapor. A thick paste of tetraiodophenolphthalein sodium salt is then made with olive oil. It is essential that the olive oil be neutral or alkaline; some of the olive oils are distinctly acid, and this ruins the solubility of the salt. In order to protect against this we add between one and two grains of sodium bicarbonate to each capsule. The capsule contains approximately six grains of the dye, and we use from ten to sixteen or eighteen of these capsules, depending on the weight of the patient. The patient is instructed to take them, beginning at 8 p. m., two at a time every fifteen minutes, and to wash them down with half a glass of water containing a little soda bicarbonate. They appear for their first x-ray at 9 a. m. in the morning without breakfast. They then eat breakfast of a cereal, toast, and coffee or tea, as they wish, and two hours after breakfast another film is taken. A third examination is made late in the afternoon, and again the following morning, providing the gall-bladder was visualized at the other examinations.

The first film is a 14x17, and must cover the entire abdomen so that it can be determined whether the dye has been absorbed or not. If it has not been absorbed it will be found scattered along the colon. Unopened capsules show up very distinctly. If it is evident that there has been little or no absorption, the examination is repeated in a day or two, the patient being instructed to take a good dose of compound licorice powder twenty-four hours before taking the capsules. We have had gall-stones become visible after this procedure, when no results were obtained at the first try. If the gall-bladder is not visualized at the second attempt, we assume that it is abnormal; but we always state that, in order to make a positive statement, the examination should be repeated after an intravenous injection of the dye. This third attempt should be postponed for a week to prevent the possibility of the toxic effect. One cannot use the Graham criteria for abnormal gall-bladders when the dye is given by mouth, as there are too many other factors to be considered. However, if one remembers that non-absorption of the dye results in nonvisualization of the gall-bladder, and that the visualization, when it does fill, is not as distinct as after intravenous injection, a fairly accurate interpretation can be made in many cases.

I wish to emphasize at this point, however, the absolute necessity of intravenous injection where the examination was negative when the dye was given by mouth. If one wishes to base his diagnosis entirely on the roentgen findings, this method is extremely valuable and will become more so as time

goes on and we learn what the variations in shadows mean. A thorough and searching history will frequently be of as much value as the use of the dye by mouth, especially if the gall-bladder does not fill. There is nothing that will shake one's ego so much as to make a positive report as to the condition of a gall-bladder, to find it entirely negative at operation.

**Howard E. Ruggles \*** (Fitzhugh Building, San Francisco)—Cholecystography has now been tried for a sufficient length of time to permit of a fair estimate of its value.

In our hands it has been of the greatest value in demonstrating stones. With good technic practically all gall-stones can be visualized. This alone is sufficient to establish the method on a permanent basis. In addition, distortion of the gall-bladder by adhesions is occasionally shown. The evidence of abnormal function is less definite, but perhaps increased experience will improve our results in this direction.

The iodide salt is preferable and should be administered in plain gelatin capsules containing 7½ grains each. Three such capsules may be taken every half hour after an ordinary dinner until the full dose has been ingested. The dosage is 5 grains of the dye to ten pounds of body weight.

Films are made at 15, 18, and 20 hours after taking the capsules. No food is allowed until after the eighteen-hour film, when a meal containing considerable fat is ordered.

The fifteen-hour examination usually shows a large and rather faint shadow, which is smaller and more dense at eighteen hours and very small or absent at twenty hours. Grossly pathological gall-bladders either fail to appear or are represented by faint outlines of approximately constant size and density. Stones are quite readily seen as mottling within such a gall-bladder or as single or multiple "holes" in the iodine shadow. If the gall-bladder is not seen the examination should be repeated, and if the second attempt is likewise negative, gall-bladder disease, a blocked cystic duct, or gross liver pathology should be suspected.

Intravenous injection is troublesome and unnecessary in most cases.

\* **Howard E. Ruggles** (Fitzhugh Building, San Francisco). M. D. Harvard University, 1913. A. B. Leland Stanford, 1907. Previous honors: Roentgenologist Base Hospital 30, 1917-18, Captain Medical Reserve Corps. Hospital connections: Roentgenologist University of California Hospital since 1914. Scientific organizations: San Francisco County Medical Society, California Medical Association and American Medical Association; American Roentgen Ray Society; American Radiological Society. Practice limited to Roentgenology since 1913. Publications: Roentgen Interpretation, by Holmes and Ruggles.

**Judging by the expressions of opinion that I have heard from patients about the group method of practice, its greatest defect lies in the feeling of the patient that he has missed a personal interest in himself, and that he suspects that he has not quite understood the results of his examination and has but vague ideas of what it is intended that he should do, largely because no single individual of the group has spent sufficient time considering him and talking to him as a whole organism needing new adjustments. As I myself have subsequently seen patients who have gone to a group for diagnosis, these misgivings of the patient often seem justified.—Henry A. Christian (Journal A. M. A.).**

## CLINICAL NOTES AND CASE REPORTS

### CARCINOMA WITH HEMATURIA

#### CASE REPORT SHOWING CONSEQUENCES OF PYELOGRAPHY

By WALTER G. SCHULTE

(From the Urological Service, Holy Cross Hospital,  
Salt Lake City)

Frank uremia, with high blood urea and creatinin, is rare following pyelography. Therefore, I am reporting the following case, with a comment on the rapid change in the blood urea after large doses of normal saline subcutaneously.

Patient, a well-nourished male, age 36, weight 176, came to the hospital November 30, 1925, complaining of abdominal soreness, aggravated by pressure, of two weeks' duration, and a peculiar "firmness" across the epigastrium. Accompanying the soreness has been flatulence, which was relieved by taking frequent cathartics. Abdominal distress keeps him awake at night, and is aggravated by eating. Previous to present attack, considered himself well. Is constipated now, but this is unusual. Has lost ten pounds in weight.

On November 29, noticed his urine was bloody. This has persisted. He has had a painless enlargement on left side of scrotum for ten years, dating from an injury. When examined by army doctor in 1917, condition was said to be hydrocele. Operation was advised. At present time feels strong, and is up and aboutward. Worked till the day before admission. No other significant data obtained from family or previous history.

Abdomen contains a large irregular mass extending on right side down to iliac crest, and on left side to level of navel. It is nodular and moves freely with respiration. No localized area of tenderness. Dullness continuous with that of the liver. Rest of abdomen seems rather hyperresonant. No shifting dullness in flanks. Large fluctuating mass in left scrotum. On transillumination, testicle appears in upper posterior part of sac. Fluid aspirated. It is clear. Testicle found to be slightly enlarged, firm and nodular. Cord shows enlargement and is not freely movable. Urine on three successive days loaded with blood. Specimens were unsatisfactory for examination. Stool examination negative. Hemoglobin, 85 per cent; red blood corpuscles, 5,000,000; white blood corpuscles, 15,000; polynuclears, 90 per cent; S. L., 7 per cent; L. L. 3 per cent.

Roentgenologist reports: "Unable to demonstrate any abnormality of G. U. tract. Kidney outline seen distinctly on right side. There is a large shadow, conforming closely to liver outline, in upper right quadrant extending down to iliac crest. This produces a definite pressure defect at hepatic flexure. Stomach normal. Mass in upper right quadrant probably metastatic neoplasm of liver, although a retro-peritoneal neoplasm must be considered."

A tentative diagnosis was made of primary carcinoma of the left testicle, with metastases in liver and possibly in the kidney, although pressure of the liver on the renal circulation was thought of as a cause for hematuria.

On December 7, in an effort to determine the origin of the hematuria and to differentiate the tumor mass, a cystoscopic examination and pyelogram were made with the following report: Bladder wall normal. Blood is seen coming from left ureteral orifice; none visible at the right. Bloody urine collected from catheter in left ureter. Specimens taken for culture. Laboratory report: sterile urine. With a plungerless syringe and under little more than gravity pressure, 5 cc. of sodium iodide were injected into each kidney pelvis and pyelograms made, which were reported as follows by the roentgenologist: Right kidney slightly larger than left. It shows a deeper pelvis. Calyces are not completely filled, but believe this due to pressure rather than intrinsic disease. Practically no iodide solution in left kidney.

We concluded that we were dealing with a primary carcinoma of the left testicle, with metastases in the left kidney and the liver. A Von Pirquet test was negative.

On returning to ward, patient complained of pain in small of back, worse on left side and radiating to left groin. Morphine,  $\frac{1}{4}$  grain, was without effect. It was repeated twice before midnight, and a hot tub bath given before there was relief. He drank water freely. Later in the evening, vomited some bile-stained fluid. Spent very restless night because of severe pain. No urine passed during the last eighteen hours. The following morning an enema was given and expelled with great difficulty. Patient unable to walk to bathroom. Still complained of pain in small of back. Had not voided, so he was catheterized but no urine obtained. No dullness on percussion over bladder. At noon was catheterized again without result. The next day, the 9th, patient was restless and drowsy. Ate little breakfast. Pain absent except when he changed position in bed. Had not urinated and was sweating profusely. Perspiration had a urinous odor, and breath an acetone odor. Drowsy condition deepened and was accompanied by hiccoughs. On the 10th, one liter normal saline solution was given subcutaneously in lateral pectoral regions, to stimulate kidney function. Saline solution, 500 cc. repeated the same afternoon. Patient was comatose and breathing very heavily. Bloody urine was voided involuntarily. Blood urea at this time was 144 mg., and creatinin 6.5 mg. per 100 cc. of blood. Coma deepened till patient was roused with difficulty. Developed Cheyne-Stokes respiration. Normal saline, 3000 cc., given subcutaneously during the day. About midnight patient urinated involuntarily. He became conscious and took fluids by mouth. A complete record of the urinary output could not be kept because of the involuntary micturition. By noon of the 11th his condition was much better and his mind clear. Appetite improved, and he had less incontinence. Bowel completely under control. On the 13th the blood urea had dropped to 78 mg., and creatinin 3 mg. Involuntary urination only during sleep. He was losing weight rapidly, in spite of a fair appetite. His general condition grew worse, the abdominal mass increasing in prominence. On the 19th blood examination showed urea 63 mg., and creatinin 2.1 mg. His appetite failed, but his fluid intake continued satisfactory. He complained of severe pain in the upper abdomen, which required morphine daily. On the 23rd, or twelve days after the coma, and sixteen days after the cystoscopy, the blood chemistry was urea 54 mg., and creatinin 1.5 mg. The tumor mass was growing rapidly and the pain increasing in severity. He died on December 28.

At necropsy there were some old adhesions at the base and side of the right lung, partially obliterating the pleural cavity. The mediastinal and peribronchial glands were enlarged and carcinomatous. There was a large carcinomatous gland at the head of the pancreas. The liver weighed 18.5 pounds, or about 8400 grams, and was thickly studded with carcinomatous masses, being a fusion of nodules. The left kidney was slightly larger than normal, soft, and hemorrhagic. Its pelvis contained a small calculus of sodium urate and some free blood. The left testicle was normal and surrounded by a thickened tunica vaginalis, which contained clear hydrocele fluid. The primary seat of the carcinoma was not definitely determined.

*Comment*—A preliminary study of the blood urea and creatinin was not made, but the patient's general condition was good and he was considered a safe risk for cystoscopic examination. The pyelograms were made after injecting the kidney pelvises with a 12 per cent solution of sodium iodide combined with a 1-3000 mercuric iodide. Using the plungerless syringe devised by J. R. Caulk, and under slightly more than atmospheric pressure, each kidney pelvis was injected with 5 cc. of solution, without discomfort. The patient left the table in good condition. The chart shows that no urine was voided during the rest of that day, nor the next two days, and the patient became drowsy and gradually lapsed into coma. At this time the blood chemistry was typical of uremia. After injection into the lateral pectoral regions of 1500 cc. normal saline, the condition improved somewhat and some bloody urine was voided. During the next forty-eight hours, 3000 cc. were injected in the



same region and the patient became rational. The two subsequent examinations of the blood show a very rapid fall in urea nitrogen from 144 mg., and creatinin 6.5 mg. to 54 mg. and 1.5 mg., respectively.

The criticism may be offered that a bi-lateral pyelogram should not have been made, but this is the established practice at many hospitals and has been my custom during the last year, with no untoward results.

The autopsy showed the right kidney to be normal, and a diffuse nephritis with hemorrhage and a small urate calculus in the pelvis of the left kidney. There was no evidence of injury to the kidney pelvis from the injection, so we are at a loss to explain the uremia. The patient's death was due to carcinoma, metastasis in the liver and the mediastinal glands, with its primary focus not definitely determined.

I wish to acknowledge the assistance of J. P. Kerby, roentgenologist, and H. R. Welch, intern at Holy Cross Hospital.

## ACUTE LYMPHATIC LEUKEMIA

### REPORT OF A CASE WITH AUTOPSY FINDINGS

JOHN J. TOBINSKI, M. D., *Los Angeles*

*History*—Male, age 35 years. Family history negative. Usual diseases of childhood. No other serious illness except a duodenal ulcer, for which a gastro-enterostomy was performed in 1914 with uneventful recovery.

*Present Complaint*—Onset January 14, with chills, fever, and general aching sensation all over body, accompanied by some localized pain under the left rib margin in the hypochondriac region. Temperature, 102; pulse, 100. Examination revealed tenderness of entire left rib margin from the xyphoid cartilage to the lumbar spine. Pain was increased by respiration. A slight friction rub was noticed from the seventh to the ninth rib along the left sternal margin. Further examination was negative except for a slight glandular enlargement throughout, and slight abdominal distention. The skin was sallow.

From January 14 to January 21 there was no change in the patient's condition, except an increased restlessness. Diagnosis on this date was "diaphragmatic pleurisy."

January 21—Patient admitted to hospital; temperature, 99; p. m. temperature, 100; pulse, 112.

A slight swelling was noticed in the left hypochondriac region; radiologic report negative.

January 22—A definite tumor-like mass about 5 cm. in diameter was palpated in the left hypochondriac region; Vidal and examination for malarial parasites were both negative.

January 23—Red blood cells, 3,500,000; leukocytes, 364,000; myeloblasts, 72 per cent; small lymphocytes, 15 per cent; polymorphonuclears, 12 per cent; eosinophiles, 3 per cent. No basophiles or nucleated red cells.

January 24—The abdomen more distended. The splenic enlargement had increased, and the axillary glands a little more swollen. The patient complained of difficulty in breathing and some headache, with increased restlessness. He refused nourishment. Red blood cells, 3,200,000; leukocytes, 320,000; hemoglobin, 45 per cent (Dare); myeloblasts, 78 per cent; polymorphonuclears, 12 per cent; small lymphocytes, 8 per cent; and eosinophiles, 2 per cent.

January 25—Patient had a fairly comfortable day. Slept at intervals. The pain in the left side continued. X-ray treatment over spleen and long bones commenced.

January 26—Patient was somewhat irrational, slightly cyanosed, and complained of severe pain in the left side. Red cells, 3,000,000; leukocytes, 297,000; myeloblasts, 70 per cent; polymorphonuclears, 16 per cent; small lymphocytes, 7 per cent; eosinophiles, 5 per cent; basophiles, 2 per cent; hemoglobin, 35 per cent. A few microblasts were found.

January 27—Condition more impossible; extensive cyanosis; pulse rapid and thready; extreme restlessness, with profuse diaphoresis. Red blood cells, 2,900,000; leukocytes, 308,000; myeloblasts, 62 per cent; polymorphonuclears, 14 per cent; small lymphocytes, 20 per cent; eosinophiles,

4 per cent, and a few normoblasts; hemoglobin, 25 per cent.

January 29—Patient markedly delirious. At times unconscious. The cell count showed 293,000 white; 2,200,000 red; myeloblasts, 73 per cent; polymorphonuclears, 32 per cent; small lymphocytes, 5 per cent; no eosinophiles. Normoblasts increased with a few basophiles. Hemoglobin, 25 per cent.

January 30—Patient expired at 2.25 a. m.

*Necropsy Notes*—No adenitis. Muscle tissue red in color. Liver extends 8.5 cm. below tip of ensiform cartilage and to 10 cm. below costal margin right nipple line, to cartilaginous attachments of sixth rib on the left side; shows fatty degeneration; measures 25 x 21 x 12 cm.; weight, 2500 to 3000 gms.

Spleen, adherent to adnexa, measures 20 x 12 x 11 cm.; weight, 4½ pounds. Capsule adherent; substance cuts without resistance; outer portion hemorrhagic to a depth of 5 cm.; remainder of substance grayish-white, with prominent Malpighian bodies. Pericardial sac contains about 90 cc. of clean straw-colored fluid; left auricle and ventricle contracted; right auricle and ventricle relaxed. Muscular wall of left ventricle, 1.8 cm., and right 0.6 cm. in thickness. Weight, about 300 gms. No sclerosis of coronary arteries. Post-mortem clot in right auricle and ventricle. Peribronchial glands enlarged; anthracosis marked; hypostatic congestion of left lower lobe. Thymus persistent. Right suprarenal of normal size; left, twice the size of right, with considerable congestion and petechial hemorrhages into medullary portion and cortex.

Kidneys—Cortices thickened; pyramids enlarged; multiple punctate hemorrhages into surface areas. No apparent structural change in the pancreas.

Anatomic Diagnosis—Acute splenic leukemia.

*Summary*—This case presents interesting phases, evidenced in: 1. Sudden onset, the patient having been previously well. 2. Symptoms were referable to the spleen; diagnosis was made by blood count. 3. Duration of illness very short; only two weeks from onset to death. 4. Daily intensification of the disease, as evidenced by the changing blood picture. 5. X-ray therapy of no avail, because the disease was progressing too rapidly. 6. Necropsy picture much like that of an acute infectious disease.

515 Westlake Professional Building.

The high mortality of acute obstruction of the small bowel is due to delay in operating. In primary cases this delay is due to doubt as to the diagnosis on the part of the practitioner; and this doubt is traceable, almost solely, to the defective (or entire absence of) description of the early stage symptoms found in the textbooks of medicine and surgery in use by students and practitioners. 2. The three symptoms—pain, vomiting, and constipation—verified by the enema test, alone, warrant a diagnosis of some form of obstruction. 3. It should be emphasized that stercoraceous vomiting, distention, rapid feeble pulse, and symptoms of collapse belong not to the early stage, but to the late moribund stage of intestinal obstruction; and that the welfare of the patient demands that a diagnosis should be made before the appearance of these symptoms. 4. Some decrease in mortality will follow from improvements in therapeutic methods, especially the more frequent use of enterostomy in the secondary and in the late primary cases, but a large decrease can only come from earlier diagnosis and operation.—James McKenty (Canadian Medical Association Journal).

No man, of course, should attempt medicine unless he is willing to have troubles brought to him, be bothered, and hear tales of woe, for every patient has one. I can scarcely believe that the same sense of responsibility can be felt by the individual physician in a group system, when a patient reaches his domain in making his medical journey, as is undertaken when a patient is assigned to some physician who, with the joint action of such associates as he may choose, undertakes to find out what is wrong with the patient and set him straight.—Hugh Auchincloss (Journal A. M. A.).

## EDITORIALS

### "ON MAKING THE WORLD BETTER"

It is significant of the trend of the times that after a year's service as president of the California Medical Association, with all the complex problems that such an honor entails, Edward N. Ewer should choose the above title for his retiring presidential address. A stirring, sane, thoughtful address it is, filled with the wisdom that comes only with experience, and reflection from a mind and heart attuned to the call of his fellow-man for guidance.

President Ewer projects a sane vision when he says: "There is a growing feeling in medical organization circles that medicine as a profession is in danger of being swallowed up by the great American service movement which James M. Cain describes as a disease, an itch to make the world better. There are several thousand of these associations in existence. A surprising number of them have for all or part of their programs the almost forcible bestowal of some form of medical service upon a people who would value it more if they were taught to seek it and pay for it."

The swallowing process is more advanced than many physicians realize. It is probably conservative to state that more than half the population of the country are now entitled to "free" medical care and an incredibly large number are entitled to it from more than a dozen sources. Most people have not availed themselves of such government bounty, and it is not likely that they will so long as the traditions, skill and spirit of service that have ever characterized the work of physicians is maintained.

It is not the charity taught and exemplified in the life of Jesus of Nazareth to which President Ewer objects, but systematized, organized charity as a business that is being stuffed down peoples' throats by paid agents of government bureaus and hundreds of organizations in active competition—pathological charity—that is dangerous to society. Alleged medical and welfare services are being promoted and sold by hundreds of organizations and mergers of organizations by methods and under the ethics used in other business enterprises.

President Ewer pays his respects to birth control, that measure formed by blinding ignorance, emotionalism, propaganda, and attempting to serve gas with spoons. No one questions the possible good that may be slowly evolved out of the scientific study of human breeding, but much that the public is being taught about it now is chimerical.

Doctor Ewer's address (on page 609) contains important messages for physicians, but it ought also to be read by intelligent individuals of the nonmedical public.

### "LOOKING BACKWARD WITH SATISFACTION AND FORWARD WITHOUT APPREHENSION"

The physician who feels himself growing weary, cynical, depressed by the sorrow and suffering, even the tragedies that show themselves naked in his

daily life of service; who is disturbed by the clutter of cultists, the unspeakable exploitation of health for many, the ignorance, superstitions and unreasonable prejudices employed by shysters to sacrifice the health and lives of the innocent and helpless; who sees daily and hourly the frightful results of the machinations of honest but benighted uplifters and the dishonestly acquired luxury some of these classes have, will find a new tonic of lasting effect in the inaugural address of President William Taylor McArthur published elsewhere in this issue.

Who is this physician in whose abilities, honesty, integrity, and art the hope of human betterment rests? President McArthur defines him as one who

"looks upon his profession as an honor. He takes pride and joy in his work. He feels that he is contributing to the welfare and happiness of man, and that he is helping to blaze and brighten a trail through a world of profound mysteries, making roads and building bridges through the swamps and morasses so that those who follow may pass safely over. His chief concern in life is to contribute to the betterment of the human race; to the relief of suffering, making life a bit sweeter and easier for others. He cheerfully joins with his colleagues in every line that tends to human progress. He is a pusher and lifter, not a leaner and trailer. He gives of his time and energy, and in the giving is the getter in a spiritual sense. He cherishes the ideals and traditions of his profession. To him such an heritage is a most valuable asset. The art and science in his work are never divorced but go hand in hand, with the art ever uppermost. By kind words and deeds and sympathy and unselfishness he keeps ever in tune with humanity's wave length. He looks backward with satisfaction and forward without apprehension. And when the end draws near his pillow is made softer by the knowledge that he has the love of his patients, the respect and esteem of his colleagues, and that his work in this life has produced dividends, deposited from time to time deep down in the inner chamber of his soul, the only dividends of value—the only dividends that will be honored by Time or Eternity."

But unfortunately there is another sort of physician whom Dr. McArthur so truly looks on as one

"who is in the profession for what he can get out of it; his interest being purely selfish. The ideals and traditions of his forefathers never enter his mind. He has no use for the past; it is gone; and the future, he claims, had done nothing for him. He takes no interest in the humanitarian work of his confrères unless as an objector. He rarely attends medical meetings or engages in any work toward the betterment of his profession. Such things bore him. He uses the term "Doctor" as a commercial trademark or a cloak of social or scientific distinction.

He attends to the call of suffering humanity as so much per in dollars. He must be assured of his pay before he heeds the call. The medical profession to him is simply a commercial enterprise. He values his work wholly from a monetary standpoint, and fashions his bill not from the ill or the pill or the skill or his time, but on the patient's ability to pay. He lives smug and independent, secure from the privations of want, yet dies in time from fatty degeneration of the soul."

After further analysis of some of the outstanding forces tending toward the advancement of medical art as well as those that are looking backward, President McArthur sounds a clarion note of optimism in this closing paragraph of his inspirational address:

"I look forward without apprehension because I have complete confidence and faith that the great majority of men and women in our profession will keep in tune; will press onward and upward, light-



ing new lamps along 'our own trail, the out trail.' So long as there is life there will be sickness and suffering and need for the educated physician. May the heritage which we received from the men who 'bulk big on the old trail' be cherished and enriched, while in our possession, and passed on to those who come after us 'unimpaired in dignity, honor, and usefulness.'"

### THE EFFECTS OF LIGHT AND PHOTOTHERAPY

The beneficial effects of phototherapy have been attributed to a variety of factors ranging from the definitely physiological to the indefinite and psychological. Objectively the effects of light have been referred to changes in reflexes, cutaneous nerves, the blood, the general metabolism, etc. Pigmentation of the skin has been regarded as both beneficial and detrimental. There are those who have repudiated certain practices of phototherapy while acclaiming other practices with no better foundation. Investigations of physiologists have been as unsatisfactory as the opinions of clinicians. Probably insufficient attention to accuracy of dosage and inadequate controls have been at the bottom of the varied notions about the physiological action of light. These deficiencies apparently have been met in the recent investigations of Reed of the University of Chicago, who reports rather uniform and interesting results on the action of light in animals.

Using beams of light of from 100 to 1250 f. c., practically devoid of ultra-violet rays, which were projected into the eyes of dogs, Reed demonstrated a definite though variable and progressive fall of blood pressure. In general the percentage fall increased with the duration of exposure, reaching ultimately the shock level at the end of from three to four hours. The heart was generally irregular. Since the same changes occurred after section of the optic and vagus nerves, they were not of reflex origin nor due to central vagus stimulation. The changes still occurred after paralysis of the vagi endings. Extract of the optic nerves and retina caused no such effects. However, the coagulation of blood was increased, and therefore there were definite changes in this circulating tissue.

This was proven to be the case by irradiation of blood alone which was caused to pass through a quartz tube connected to a carotid artery. The returning irradiated blood caused the same changes in blood pressure as did the light in the eyes, and the coagulation increased so rapidly that it was necessary to employ the anti-coagulant, heparin, in order to carry the experiments to successful completion. This direct irradiation of the blood resulted in increases in its uric acid content up to 38 per cent, the blood at the same time appearing darker and sedimenting more rapidly than before. There was no doubt, therefore, of the physical and chemical changes in the blood, and Reed suggests that these changes are fundamentally the basis of the physiological effects of light.

Although Reed made no studies of the capillaries directly or of changes in blood volume, the blood pressure changes observed by him must be relegated to some alteration (probably increase) in the permeability of these vessels. The altered permeability

of the capillary endothelium is apparently due to or associated with the physicochemical changes in the blood. Such a change in the capillaries and blood of the skin exposed to light would not be surprising, but it required a careful analysis on Reed's part, going from one factor to another, to arrive at a satisfactory conclusion.

This view of the action of light suggests a close analogy to the action of arsenic, a capillary poison, and the therapeutic benefits from and deleterious effects of this drug bear a similarity to those of light. Reed's demonstration of the physical and chemical changes in irradiated blood emphasizes the need of closer attention to the relatively unseen and small, if not hidden, things whose importance is increasing daily not only in phototherapy, but also in other branches of medicine.

Reed, C. I.: *Am. J. Physiol.*, 1925, 74:511, "Studies on the Physiological Action of Light. II. Depression of Arterial Blood Pressure."

Reed, C. I.: *Ibid.*, p. 518, "III. Effects on Arterial Blood Pressure of Direct Irradiation of Blood in Vivo."

Koch, F. C. and Reed, C. I.: *Ibid.*, 1926, 75:351, "V. Increase in Uric Acid in Blood Irradiated Directly."

### DRUG ADDICTS AND DRUG ADDICTION

#### The Patient and the Disease: Thoughts on Causes, Consequences, and Cures

*A recent decision of the Supreme Court of the United States intimating that the Harrison Narcotic Law might be in danger if an appropriate test case were brought before that body; the activities of the Narcotic Committee of the American Medical Association; the increasing importance being given the subject by many organizations; and the consequent renewed interest of the daily and periodic press, all seem to point to the approach of a wave of aroused public opinion in the narcotic situation.*

*In California the commendable activities of the Narcotic Committee authorized by the last legislature under the chairmanship of Senator Sanborn Young, aided by committees from medical associations, women's clubs and civic organizations, have intensified local interest.*

*In view of these facts and the certainty that the question will be an active one before the next session of the legislature, and because many physicians and other interested citizens who have read some of my brief discussions of certain phases of the narcotic situation have asked for a fuller statement, an editorial in this and two subsequent issues of California and Western Medicine will be devoted to a discussion of drug addicts and drug addiction.*

*These editorials will be brought together in a reprint, copies of which may be had for the asking.—EDITOR.*

#### I

If the growth of the drug evil is to be arrested, policies must be revised and action predicated upon certain immutable natural laws and painful facts. We must first of all accept the fact that narcotics are "one way out," a solace to the footsore, weary, and downtrodden; mitigators of physical, mental, and moral suffering; conscience-deadeners for those who are haunted by the "still small voice"; bracers and nerve chargers for weaklings, wrongdoers, and criminals.

We must admit that narcotics stand pre-eminent among useful drugs in the intelligent relief of suffering and treatment of diseases; that drug addiction in persons otherwise reasonably healthy is not particularly difficult to cure; that in difficult problem addicts their drug disease is almost invariably but one of their several troubles, and that to cure them of their addiction alone is but to remove one weed from a garden of weeds.

Drug addicts, when considered from the angles of prevention and management, logically fall into major and more or less distinctive groups of those who: (1) Are

otherwise physically, mentally, and socially solvent; (2) have one or more physical infirmities of consequence; (3) are mentally infirm or defective; (4) are socially and morally insolvent or defective; (5) combine in themselves the handicaps of two or more of these groups; or, (6) are incurably infirm, degenerate, criminal, or dangerous. There are, of course, varieties and grades among persons in each of these groups, and unfortunately a discouraging number of them drift eventually into the class of the hopelessly infirm, criminal, degenerate, or dangerous.

## II

Drug addiction among otherwise reasonably sound citizens is a disease quite as effectively handled as are other diseases, and by the same machinery of health service. We cannot expect it to be better handled than are tuberculosis, cancer, syphilis and many other diseases, any one of which is vastly more destructive of health, happiness, and life than is drug addiction among this class of people. Such persons usually acquire their habit pretty much as other habits are acquired—by imitating associates. A few are unavoidably made—and usually cured, even before they are aware of their affliction—by physicians in the legitimate treatment of the sick. Many youths experiment with these dangerous drugs to satisfy the same curiosity that leads them to experiment with tobacco—a curiosity incited largely by intriguing stories whispered about pretty much as are sex stories.

The considerable number of people who acquire their drug disease from tastes cultivated by narcotized patent medicines, soothing syrups, cough mixtures, "tonics" and what-not, has been materially decreased by the institution of partially effective food and drug laws. A saving characteristic of addicts who are otherwise reasonably sound is, that they have the will to throw off their disease once its dangers are made clear to them and they are endowed with the physical health, the intelligence, and the moral stamina that make complete recovery under wise guidance certain. Thousands are so cured whom no one except the family doctor knows of.

Government duties and responsibilities among these people are quite limited. They are as well handled as are those ill of other diseases by the same doctors and health agencies, and they, their families, and doctors resent meddlesome interference and more or less official branding by the stupid enforcement of stupid laws.

## III

When an otherwise useful, productive, reasonably sound individual who suffers from severe pains and aches of any kind—asthma, neuralgia, gall-stone colic, jangling nerves, or what-not, once experiences the soothing effects of narcotics, another element is introduced into the problem of drug addiction and another group created. There are thousands of such people. They do not want to take drugs and they know the dangers they incur in so doing. But neither do they want suffering, and with them existence becomes a choice of two evils. When the morale becomes sufficiently disturbed by prolonged suffering, many accept the only solace they know—or that anyone else knows—and thereby add to their problem and subsequent misery, knowingly and deliberately. Obviously, persons in this group may be cured of drug addiction only by curing their other infirmities. Obviously, also, it is an individual problem because of the great variety in kind, cause, and curability of physical diseases.

Here again we are confronted with a problem preeminently medical. It is first of all the problem of the family doctor and the other agencies of health. The patient should be aided in every way to avail himself of the best that medical science has to offer, and if he succeeds in removing the causes of physical suffering, the cure of the drug addiction becomes a relatively simple matter. If, on the other hand, the physical malady proves incurable, as it may in, let us say, cancer, we are confronted with the most pitiable of all dilemmas. Under our cruelly stupid "standardized" laws the suffering patient has the choice of being officially branded or becoming a criminal and so does the doctor who allows his humanity to induce him to employ approved remedies for the relief of suffering.

Just why so many of the growing group of the men-

tally unstable, ill and defective should resort to drugs is not clear, and will not be fully understood until we have more definite knowledge of the mind in health and disease. We do know that not only drug addicts but many other undesirable types of citizens are recruited in large numbers from mental aberrants. Intelligent students of the subject know also that there is no more chance of curing the drug habits of such people so that they may withstand temptation than there is of curing their other mental failings. A few of these citizens are being cured of their mental infirmities, and when this has been accomplished, cure of their drug disease becomes a relatively simple matter.

Many more of this great group can be made productively useful to society by providing them with such mental splints as intelligent supervision, direction and, where necessary, restriction. The cure of their drug addiction may be accomplished by the simple process of taking them off the drug, *but to keep them cured* requires the constant application of the mental splint throughout life—a discouraging outlook.

It is among this vast group of the mentally unstable and infirm that promoters of alleged "narcotic cures"—and other "cures" as well—reap their harvest: a ghastly business that calls for suppression. This group of unstable citizens, whether drug addicts or not, is much more than a medical problem; it is the problem of society—one of its greatest problems.

The socially and morally infirm and the defectives constitute one major group of unstable citizens, and from it is recruited an amazingly high percentage of drug addicts. Many of these citizens are so maladjusted that society feels obligated to take cognizance of them and often restrict their privileges. To many of them drugs offer their chief solace and the nearest approach to happiness they ever know. To them narcotics are looked upon not as a curse, but as a blessing. To many of the group of social defectives narcotics are used for their bracing effects to enable the subjects to perform deeds of valor or more often of crime. Remorse and frustrated desire hit the social defective hard and often, and once he experiences the temporary relief supplied by a narcotic he becomes as devoted as a neurasthenic to his patent medicine, or a fat woman to obesity cures.

By far the largest group of drug addicts are recruited from those who are handicapped not by one, but several or all, of the defects mentioned in the preceding groups. In one series of 1000 drug addicts systematically studied in the Orient, there were nearly 4000 separate and distinct physical diseases; an average of nearly four ailments of consequence to each person. The proportion of the mentally unstable and defective, as well as the socially maladjusted, was also very great. The few who were physically, mentally, and socially solvent were cured without difficulty, most of them permanently so. Among the others only those were permanently cured of their addiction who were first or at the same time relieved of their other important handicaps. Other careful medical studies reveal similar multiplicity and interdependence of the infirmities of drug addicts.

Thus, the thoughtful student inevitably arrives at the conclusion that the drug addict, in certainly more than 90 per cent of instances, is precisely as curable of his drug addiction as he is of his other and often more serious infirmities; that to attempt to cure his addiction alone is futile, and that were it possible to eliminate addiction, there remains a problem citizen with but one—often the least important—of his troubles removed.

## IV

Drug addiction, in its relation to its potential and actual victims, reaches into and affects many other phases of society, which is disturbing clean-minded citizens everywhere and finds expression in all sorts of organizations, moral, social, political, inefficiently milling in disarticulated, ineffective efforts at cures. Laws—national and state—occupy first place among these remedies. None of them is intelligently conceived or effectively enforced. The principal national law, according to the Supreme Court of our country, is a *revenue measure*! It takes toll from vice and proposes to remedy a social evil and cure sick patients by *thou shalt not* edicts calculated to embarrass doctors in their humanitarian work, to tax them



and direct them in the practice of their profession. State laws mostly follow the national lead and some of them go further in the stupid attempt to cure physically, mentally, and socially sick citizens and control those who are licensed to serve them intelligently by restrictive but nevertheless amazingly productive revenue measures; but when it comes to dealing with the really big problems of the manufacture, distribution, and marketing of these dangerous poisons, enthusiasm even for revenue is not so noticeable.

There are honest and dishonest merchants interested in the narcotic drug business. Honest ones are necessary because honest production and marketing of narcotics for necessary purposes is great, world-wide, and must be maintained. With a solace for their miseries, discomforts, and longings before their minds, the patient with his physical pains, the mentally defective with his lopsided ego, the social failure with his longings, the morally submerged with her diseases and her conscience, the would-be criminal with his cowardice, the flotsam and jetsam, the unstable, the weary, remorseful and what-not, all cry out for the relief they believe "drugs" can give them—and never mind the penalty; that, they realize in a vague way, they must pay. So long as these conditions obtain, there will be plenty of men who will risk prisons for their bodies and hell for their souls to supply markets for the profits they may have.

Thus we see briefly that the problem of drug addiction is a many-faceted one, and that its limitation requires battle all along the long and devious road between the poppy fields, the coco groves, the synthetizing laboratories, and consumers—consumers everywhere in all walks of life, in all conditions of physical, mental, social solvency. Any intelligent constructive campaign must recognize that: (a) Certain quantities of these drugs are essential in the relief of suffering and the treatment of disease; (b) drug addicts are of as many varieties as are other individuals, and they may be intelligently succored only as individuals by individualistic methods. As Chairman W. C. Woodward of the American Medical Association Narcotic Committee has so well expressed it: "So far as the narcotic drug supply is concerned, the problem may be national and even international; but so far as the addict is concerned it is individualistic, and we are confronted with the task of mapping out a program that will cover the entire field and yet permit us to handle addicts as persons."

*(To be continued in the June issue)*

The Life Extension Institute in a recent advertisement states that heart disease, kidney disease, apoplexy, cancer, and tuberculosis are preventable diseases. This statement is partly true, but it is very largely untrue and much harm may result from allowing the public to believe that it is entirely true. Certain types of heart disease such as those due to syphilis are largely preventable, and we wish that we could prevent such types as the rheumatic and the arteriosclerotic, and perhaps occasionally we can, but it is only occasionally. To some degree we may prevent kidney disease, but our knowledge is decidedly too imperfect to allow us to make such conclusive statements in honesty to ourselves and our patients. Given arteriosclerosis, the prevention of which is in the shadowy borderland of knowledge, we can never with certainty predict freedom from the dangers of apoplexy. Early cancer may be cured, but it cannot be prevented. Tuberculosis alone offers some hopes of becoming a preventable disease, although even with this infectious condition our effort will often be met with failure. The health examination is most decidedly a worthy objective, but in all honesty let us recognize its limitations even as we proclaim its virtues.—*Boston Medical and Surgical Journal*, March 25, 1926.

"From pillar to post," or in cruder vernacular, "passing the buck," has a meaning requiring no explanation. It is associated with the group plan of practice more than when responsibility is shouldered by the individual. This shelving of responsibility is one of the worst features in hospitals. It is bad for the patient, worse for the nurse, inexcusable for the physician, and a wretched quality of medicine.—Hugh Auchincloss (*Journal A. M. A.*).

## "TEN COMMANDMENTS FOR THE 'COMMON DOCTOR'"

Thou shalt have no favorites in newspaper correspondents in order to see thy name in print.

Thou shalt not bow down to graft, nor to the image of gold.

Thou shalt hold thy tongue when sued for malpractice, remembering silence is golden and that thy adversary is after thy gold and will get it if thou art not discreet.

Remember the Sabbath day and keep it holy; six days shalt thou labor and on the seventh also, if thou hast an opportunity to do good or the prospect of a good fee.

Honor the fathers of thy profession, that thy days may be long upon the land and thy usefulness lengthened, through the example and achievements of thy fathers.

Thou shalt not sanction adultery nor produce an abortion.

Thou shalt not steal thy brother's patients nor forgive him when he steals thine.

Thou shalt not kill thy brother's opportunity for earning a living, nor murder his chance of usefulness. He, probably, is thy superior.

Thou shalt not bear false witness against thy neighbor, nor speak evil of his good name. His reputation may be better than thine.

Thou shalt not covet the specialist's fee, nor dispute over a division. Let him have all the money; he may think he earned it. You must be content with glory.

—W. W. Brown, *Virginia Medical Monthly*.

**Chiropractic Not Harmless**—A decision by the Supreme Court of Illinois relating to chiropractic has brought out a new answer to the claims of chiropractors and practitioners of similar methods. The defendants in the case argued that practice of chiropractic was "a useful and harmless calling which cannot be regulated by the state." This claim was declared to be so entirely without merit that any discussion of it was unnecessary. The decision went on to state, however, that "if a chiropractor can, by manipulation, move a dislocated vertebra so that the pressure on a nerve can be relieved and paralysis cured, he can by the same process dislocate a vertebra and cause a paralyzed condition. Any method of treating human ailments which, when practiced skilfully, can restore a diseased human body to health is capable of doing great harm when practiced without care or skill. A method of treating human ailments cannot be both useful and harmless. If it is sufficiently efficacious to be useful, it is at the same time capable of producing harmful results." The chiropractor, no less than the physician or anyone else who is to treat the sick, needs to have a sufficient training in the fundamentals of medicine so that he will know at least when his manipulation may be harmful.—*Journal A. M. A.*, February 13, 1926.

Since I began the study of medicine, I have devoted myself chiefly to a careful examination of the most valuable modern treatises. In this particular I differ, I know, from you, who are a profound scholar; but my books have always been few, though I hope well chosen. When I was at the university, a few vials, a skeleton, and an herbal, chiefly formed my library. By following the dictates of common sense, while I practiced at Oxford after taking my bachelor of medicine's degree, instead of stoving up my patients who were ill of the smallpox, as was done by the Galenists of those days, I gave them air and cooling emulsions, and thus rescued more than a hundred from the grave.—*The Gold-Headed Cane*.

**"Maternity Bill will Make a Midwife out of Uncle Sam"**: The allowance of the \$1,000,000 for hygienic, maternity, and infancy work under the Sheppard-Towner Maternity Act, as proposed in the pending Department of Labor appropriation bill, will make Uncle Sam "the midwife for every expectant mother in the country and the wet nurse for the nation's babies," according to Representative Tucker. "I am against the Government appropriating any money to any function which properly belongs to the individual states."—*Chicago Tribune*.

## - The MONTH with the EDITOR -

Notes, reflections, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

California continues to hold the medal as the civilized world's greatest home of smallpox. The Antis are better financed than they are in most places, and then too they just naturally flock to our western shores to take advantage of nature's blessings. After all, smallpox is not as dangerous as are some other death-dealing agencies which stalk our streets with little hindrance. Prevention of smallpox is simple, sure and safe. Most of its adult victims have only themselves to blame, so why worry? It's the children and the irresponsibles that call forth our sympathy. A child with smallpox is a distinct reflection upon the intelligence of our community, and a death among these little ones from this disease should be followed by a manslaughter charge against someone. As for the adult who cares to commit suicide in this filthy manner, why bother too much? He is usually not much of a loss.

Shall we let Uncle Sam turn schoolmaster? Are we so satisfied with our bureaucracy at Washington that we want to intrust our children to it? Before we make our schools into a solid national system let us stop and think. Standardization is a fine thing for milk containers and automobile parts, but is it good for children?—The Outlook, March 10.

"Halsted" is Dr. Fielding Garrison's title of a delightful sketch of the life of this great surgeon in American Mercury for April. Perhaps no man did more to make surgery a medical science than Halsted. Doctors and medical students and young men and women contemplating the study of medicine will find much of profit in a careful reading of Dr. Garrison's sketch of his friend's life.

Alexis Carrel (The Dearborn Independent, March 27) under the title of "Things That Doctors Do Not Know" enunciates some rather unusual and courageous philosophy. His discourse will be severely criticized by those optimists who are engaged in efforts to build up better men and women and particularly by those who are being paid to revolutionize or evolutionize the human race.

After acknowledging and commending the great advances that have been made, particularly in the control of infectious diseases, the distinguished author gives us this to think about:

"But we may doubt whether this victory has so far brought much happiness to the world. Has it greatly modified the position of the average man as regards disease and death? Probably not. Although the adult individual has much fewer chances of dying from smallpox, cholera, tuberculosis or typhoid fever than fifty years ago, his expectation of reaching the age of 75 or 80 has not markedly increased. But he surely has more prospect of being tortured by some form of cancer, afflicted with slow diseases of the kidneys, the circulatory apparatus, the endocrine glands, of becoming insane, suffering from nervous diseases, or of making himself miserable by his lack of judgment and his vices. Modern medicine protects him against infections which kill rapidly, but leaves him exposed to the slower and more cruel diseases and to brain deterioration."

A correspondent asks us if we recommend "The Conquest of Disease" by David Masters (Dodd, Mead & Co.) for the nonmedical reader.

This book contains much useful information about certain phases of medical history and about some persons who have contributed to the making of such history. An outstanding and unfortunate feature of the book is its

criticisms of the medical profession in its relation to medical progress. This editor found the book difficult and tiresome reading.

Doctors who are interested in following medical progress and evolution will find that the editorial on "Ethics and the Medical Profession" (Journal A. M. A., March 27) is interesting and will commend its timeliness.

Typhoid fever is again definitely on the increase throughout our country. Certain facts and many theories are used to explain it. Among these the dangers inherent in camping stand out and are liable to increase the hazards of this occupation during the summer months.

The public health authorities will do what they can to keep water and camp sites safe, but the wise camper will also follow the simple preventive rules of personal conduct, and add to his safety by having his doctor give him antityphoid inoculation before he leaves home.

A very large percentage of the regular medical profession is both progressive and ethical, but there is an element within our profession that represents quackery and dishonesty which little effort on the part of the profession has been put forth to abolish. Some of the quackery and deception practiced by supposedly reputable members of the medical profession is of that refined and polished type that is hard to detect by the average observer. Some of it is blatant and crooked, with no attempt to gloss it over, and our profession suffers by harboring within its ranks these men who disgrace us.—Journal Indiana Medical Association.

The Medical Women's National Association was formed twelve years ago through the wisdom and altruism of a group of women eminent in the profession. Medical women saw the same need of organization of women in this profession that was seen and acted upon by women in other professions and by women interested in social betterment of all kinds.

Opposition has arisen from an honest opinion against sex distinguishment and also an apprehension that a woman's organization would seem to be a pulling away from the American Medical Association and local societies; an apprehension that it would add to the prejudice of the men in the profession, where such prejudice exists.

*Experience of twelve years shows without shadow of doubt that these apprehensions are unwarranted.* Experience shows that where medical women get together and work together, they go up in the estimation of their confrères. They are instrumental in opening and holding opportunities for useful and lucrative work that without this organized influence would be closed.—Bulletin Medical Women's National Association, April, 1926.

"Iron rust costs \$300,000,000 a year": headline. This sum would not pay interest on the cost of the "rusting" of human blood-vessels.

A correspondent wants to know if the following statements of Walter M. Dickie in the Weekly Bulletin of the California State Board of Health reflect the opinions of other doctors:

"A sick person is never an asset to his fellow-men; he is always a liability, regardless of his financial condi-



tion. . . . In the last analysis, life depends upon health. Without health, there is nothing."

Visiting nursing or hourly nursing fills one of the most important gaps in the medical program. It ought to be more general than it is. Detroit has eight visiting, hourly, or home-visiting nurses working through a control exchange. Two dollars is charged for the first hour, and fifty cents for subsequent hours.

There are sporadic attempts to carry it on in California. If county medical societies and county nursing organizations would get together, a comprehensive plan could be worked out that would insure better medical care of patients at reduced cost without affecting adversely the material interests of doctors or nurses.

#### California, Nevada, and Utah Doctors Publish Elsewhere:

[Note.—Members of the California, Nevada, and Utah Medical Associations are invited to supply the editor with reprints or marked copies of magazines containing their articles or very brief abstracts. All that we receive will be noted regularly in this space.—Editor.]

—L. B. Dickey, San Francisco, "Duodenal Ulcer, with Diverticulum," *Journal A. M. A.*, March, 1926.

—Frank Hinman, San Francisco, "The Indication of Nephrostomy Preliminary to Ureterorectoneostomy," *Journal A. M. A.*, April, 1926.

—Albert H. Rowe, Oakland, writes on "Bronchial Asthma in Children and in Young Adults," *American Journal of Diseases of Children*, January, 1926.

—Frank H. Rodin, San Francisco, "Treatment of Iridocyclitis by Subconjunctival Injections of Atropin and Epinephrin," *Am. J. Ophth.*, January, 1926.

—Moses Scholtz, Los Angeles, "Trichophytosis of the Glabrous Skin," *M. J. and Record*, March, 1926.

—John D. Lawson, Woodland, California, "The Treatment of Pyogenic Infection by Roentgen Irradiation," *Radiology*, February, 1926.

—John W. Shuman, Los Angeles, "The Anemias," *J. Lab. and Clin. Med.*, August, 1925; "Duck Season Closes," *M. Times*, April, 1926; "Cancer of Stomach," *J. A. M. A.*, April 10, 1926.

—William Everett Musgrave, San Francisco, "Social Service Sifts Needy from Pretended Indigents (Children's Hospital of San Francisco)" by asking opinion of physician as to financial status of applicant for aid, cements friendship of medical men and distributes relief properly.—*The Nation's Health*, March, 1926.

Notwithstanding the very commendable progress that has been made in developing the technique of modern public health administration, there is considerable unfinished business. Public health authorities have recognized the limitations of police power in controlling disease or promoting better health. This has introduced a new activity, usually referred to as popular health education. Suppressive and preventive measures, compulsorily enforced, will still be necessary; but we have learned that the individual will contribute more to the health of his community if he can be taught to practice the essential principles of health, hygiene, and sanitation. The field of popular health education has not been half explored. Many methods and devices have been tried, but these efforts have been directed chiefly toward mass teaching. A direct appeal to the individual seems to promise more encouraging results; and of all the agencies that have established effective and extensive contacts with the individual, none has been as successful as the public health nurse.—Hugh S. Cumming.

The Ohio State Journal thinks that a slight extension of the lie classification now seems advisable. There are now lies, damned lies, and wet and dry statistics.—*The Outlook*.

## MEDICAL ECONOMICS AND PUBLIC HEALTH

I repeat that the best hospitals we have in the world are west of the Alleghany Mountains; those that are playing the game. They have the records, the laboratories, and the staff meetings. The result is apparent when one attends the clinics in this part of the country and the clinics in the East. You all know that because you travel, but they do not come over here to see what you have; but you know when you go East you are perfectly satisfied to come back here. You may be stimulated to do a little better, but not because the average is against you.—Franklin H. Martin, *Southwestern Medicine*, March, 1926.

A long acquaintance both with mathematics and with a reasonably wide variety of applications thereof has made me somewhat skeptical of formulas, and I have perhaps unwisely gone so far as to state in print that I do not believe formulas.—Edwin B. Wilson (*Science*, March 19).

**New Health Officers**—Francis F. Malone, M. D., has been appointed health officer of the city of Calipatria in Imperial County to succeed L. L. Lindsay, M. D.

Dr. Malone is a member of the California Medical Association.

As we have pointed out in earlier numbers, the county hospital, financed and controlled by the county commissioners and supported at public expense, is very apt to be a thorn in the flesh of the medical profession, and evidence of it already is manifested in some counties of the state. In the first place, not a few of these county hospitals are served by doctors without pay, though everyone else connected with such institutions received compensation. There is no objection to this as long as the service is rendered to the indigent, but now comes a plea from some counties that a hospital maintained by taxation should offer free service to the taxpayers, and the doctors are expected to supply the service either gratuitously or at beggarly fees. In those counties where salaries are paid, the salaries are small though the volume of work may be large. Even the question of care of the indigent is one in which there is no consideration for the medical man, though everyone else is paid. The advantages of having a well-equipped hospital in every county cannot be denied, but an effort should be made to run these hospitals just as any other hospitals are run, with the doctors allowed minimum fees for attendance upon charitable cases, and the right to charge usual fees for any and all other patients taken to the hospital. No other basis will be fair to a deserving and self-respecting medical profession. The indigent deserve care at public expense, but there is no more reason why doctors should render gratuitous service to the indigent, who in reality are a community charge, than that grocery keepers should supply food gratuitously to the indigent. In other words, everyone should share through taxation the support of the indigent, and no one should be expected to furnish more than his share in that care, the doctor included.—*Journal Indiana Medical Association*, March, 1926.

Most experienced hospital executives will take issue with W. P. Shepard, Berkeley, California Health Officer (*Pacific Coast Journal of Nursing*) when he says: "The marvelous fact that the Pasteur technic for the care of contagious diseases has made it possible to attend any number of different contagions in a single room, if need be, without serious risk to either the patients or the nurses, has made no impression upon many hospital superintendents or superintendents of nurses. The wonderful records of our leading contagious disease hospitals, where hundreds of cases of every description are cared for constantly with a remarkably low rate of cross-infections, are entirely overlooked by these leaders of medical

institutions. The fact that a nurse well trained in technic may care for almost any type of contagious disease, even including the dread pneumonic plague, without serious danger to herself, is never so much as whispered to their students."

William R. Redden, who is said to represent the medical profession on the directorate of the National Red Cross, in recent articles is quoted as having said: "When Public Health and Preventive Medicine were twin individuals without hair on their heads, or clothes on their hides, they were almost strangled to death by the medical profession. From all over the country came the cry from professional lips: 'Kill them or they will kill our business. Don't you know that if you stamp out typhoid fever the very bread and butter will be snatched from our mouths, for typhoid cases, long drawn out, followed by many complications, pay practically all our overhead expenses during most of the year?'"

We wonder what good Dr. Redden thought he would do to the A. R. C., to himself or the public by thus attempting to injure a great profession.

The modern public health movement, spanning a period of fifty years, has progressed from attempts merely to suppress disease to an era of prevention, and, finally, has recognized the necessity for health-promotion activities.

Notwithstanding the commendable progress that has been made in public health practice, recent surveys of 186 large cities have disclosed a great variety of method and procedure, many of which are inconsistent and not in accord with our present knowledge.

There is a growing tendency to encourage standardization of public health methods and to establish arbitrary measures, for the relative values of many items can be definitely determined only after careful scientific study and interpretation of details and a demonstration of the principles involved, preliminary to any attempt to establish relative values or to revise present methods.—Hugh S. Cumming.

A prescription on file in a drug store is *prima facie* evidence that the physician who wrote it was treating a sick person for whom it was written. It is placed on file by the druggist for his own protection, and is a semi-public document which is open to the inspection of authorized state officials. A prescription for a narcotic or an alcoholic liquor is evidence that the person for whom it is intended is sick, and that the physician who wrote the order is actually treating the patient according to the scientific standards of modern medicine. Giving an alcoholic liquor to be used for any other purpose constitutes perjury and lying.—Editorial, New York State Journal of Medicine.

When anyone attempts to propose an "ideal" plan of organization for adequate community health service for a city of a given size, it might seem logical to review the records of a group of apparently progressive communities and to pick out the city with the most highly developed service and offer that as the ideal or standard for the group. In attempting to do this, one would soon reach the inevitable conclusion that no two cities have followed the same scheme of organization.

The exact plan of local health service that will fulfill all the essential requirements of any selected community must be adapted to the circumstances and conditions peculiar to that community. Because of climatic, geographic, political, social, racial, economic, or other purely local characteristics, the vital health problems of one city may well differ from the particular problems that are of special concern to some other city.—Hugh S. Cumming.

A recent number of the *Saturday Evening Post* takes the medical profession to task for its inability and ineffectiveness in putting over to the public the gospel of good health. It charges the medical profession with being the most tongue-tied of all learned professions, and apparently thinks that doctors still adhere to the dead lan-

guages in their manner of speech and of writing. It commends their zeal for scientific advancement and knowledge, but implies that much of this knowledge remains barren because it does not become the common property of the layman. The editor speaks of the doctor's love for long, accurate Greek and Latin words as being his besetting sin, and charges him with the lack of ability to write simply racy English, which would make his message attractive and understandable.—*American Journal of Public Health*, March, 1926.

**The Marion H. Lippman Laboratory**—Mr. Sugarman is retiring from the well-known Lippman & Sugarman Laboratory in the Butler Building, 135 Stockton Street, San Francisco. The laboratory will hereafter be continued by Dr. Marion H. Lippman in the same place where it has been conducted for twelve years. Dr. Lippman is a B. S. and an M. S. from the University of California. He has taken courses in Bacteriology and Wassermann Reaction at Harvard Medical School, the University of California, and Stanford University. During the war Dr. Lippman served as a private at Camp Fremont Base Hospital and later at the Yale Army Laboratory School. After many years of experience he became convinced that good laboratory diagnosis and the right sort of laboratory service to physicians was impossible to render without medical education. He therefore took up the study of medicine and graduated from the University of California Medical School in 1925. He is now assistant instructor in surgical pathology at the University of California Medical School.

Some pharmaceutical manufacturers and distributors advertise both to the medical profession and the public. Sometimes they make claims in their public advertising that would not be accepted by an ethical medical publication. Others like the Laboratory Products Company of Cleveland, Ohio, advertise *only* to physicians. In a recent letter to doctors they state that: "From the very beginning S. M. A. has been advertised to the medical profession only. We have depended entirely upon the co-operation of the physicians to prescribe S. M. A. It is through this excellent co-operation that we have been able to bring S. M. A. to the foreground among all fine products for the infant's diet."

"We want to be of service to the medical profession. If you want literature and samples of S. M. A., write for them. If you have questions to ask about S. M. A. or protein S. M. A. (Acidulated), ask us. If you have any suggestions to offer, we shall welcome them."

"We are at your service, and we want you to use the enclosed stamped postcard. No additional postage is necessary."

That is fine advertising, and it shows a high ethical policy deserving of support.

The patents granted to Drs. George F. and Gladys H. Dick have been assigned by them to the Scarlet Fever Committee Incorporated of Chicago for administration, and the Scarlet Fever Committee Incorporated has granted the first license to E. R. Squibb & Sons for the manufacture and sale of Authorized Scarlet Fever Products. Prepared under the Dick patents, these products consist of Scarlet Fever Antitoxin, both therapeutic and prophylactic; Scarlet Fever Toxin for the Dick Test to determine susceptibility to Scarlet Fever; Scarlet Fever Toxin for active immunization against Scarlet Fever, and Scarlet Fever Antitoxin to be used in the diagnostic Blanching Test.

The Council on Pharmacy and Chemistry of the American Medical Association has accepted all of the Scarlet Fever Products put out by Squibb & Sons, and the Squibb Scarlet Fever Toxin, both for the Dick Test and for Active Immunization, are the first, and so far the only Scarlet Fever Toxins accepted by the Council on Pharmacy and Chemistry. These authorized products are prepared and thoroughly controlled by (1) the controls and tests made in the Squibb Biological Laboratories; (2) under Government regulations samples of each and every lot of Scarlet Fever Toxin and Antitoxin are required to be submitted to the Hygienic Laboratory for test and



approval; and (3) samples of each and every lot of Scarlet Fever Toxin and Antitoxin prepared under the Dick patents are required to be submitted to the Scarlet Fever Committee Incorporated for laboratory tests and clinical trial before any of that particular lot is placed upon the market.

This triple control (which does not exist for any Scarlet Fever products not prepared under license from the Scarlet Fever Committee Incorporated) insures products of maximum potency and is, in effect, a guarantee on the part of two control institutions, independent of the Squibb organization, as to the potency of such preparations.

In any type of hospital organization I am convinced that there should be an individual responsibility for the care of the patient, not a group responsibility. Numerous ways of selecting the individual for this relation to the patient could be thought of, any one of which would work with complete satisfaction, provided this responsibility is recognized by both staff member and patient and the staff member, selected for the responsibility, is a broadly trained, competent clinician.—Henry A. Christian (Journal American Medical Association).

**Of Such Are Statistics Made**—In one large city the seventy medical examiners of schools differed so widely as to what constitutes a defect of vision that one found only 1.5 per cent, while another found 24 per cent defective. The range as to diseased tonsils was from 2 per cent on the one hand, to 35 per cent on the other; for nasal obstruction, from 1 to 22 per cent; for decayed teeth, from 8 to 49 per cent; for stoop shoulders, from .1 per cent to 19 per cent; for anemia,  $\frac{1}{2}$  per cent to 25 per cent; and for "defective heart," from none to 3.5 per cent—Editorial, Medical Journal and Record.

On July 4, 1885, little Joseph Meister was going to school at the village of Meissengott in Alsatia. He was but 9 years old, and of a sudden a dog, its jaws all dripping saliva, the gleam of madness in its eye, leaped on him. Down went the boy, crying for help, seeking to protect himself from the ferocious beast that was worrying him savagely. A laborer saw the scene, snatched up a bar of iron, and attacked the dog, which bolted back to its owner. The owner at once shot it, for its madness was terrible to see. And poor little Joseph Meister, with over a dozen bites about his arms and hands and legs, was carried to the local doctor. "What shall I do?" the weeping mother cried. "When I have dressed his wounds, take him to Paris to M. Pasteur," the enlightened doctor replied, for he was conversant with Pasteur's work, and two days after the attack little Joseph Meister was led into the laboratory. Pasteur's heart went out to the little boy. He longed to save him from an agonizing death, but he could not make up his mind, did not know what to do. In his perplexity he consulted two colleagues. "Vaccinate," they urged. "It will be quite safe." Pasteur at length agreed. The child was already doomed. The only chance of saving him was to vaccinate, to treat the child as he had treated so many dogs. That same evening the weeping boy received the first inoculation of the harmless virus. And day by day a deadlier virus was injected, and day by day Pasteur became more and more worried. He could not work, could not sleep. His anxiety was almost unbearable. His whole attention was concentrated on the lad he was trying to save. He prayed that he might succeed, was fearful lest he should fail. A dozen times in ten days the inoculating needle pricked into little Meister's skin, and then the last inoculation was given from a rabbit but newly dead. Pasteur's anxiety was at fever-pitch. All night long the scientist tossed about in his bed, his eyes heavy with lack of sleep, his brain tortured by terrible mental pictures of little Meister dying in the greatest agony. The next day the boy ran in to him, still enjoying health, showing no sign of the dread symptoms that Pasteur had got to know so well! Yet he kept the boy by him, afraid to let him go to his home. He, who admitted nothing until he had proved it, would not admit to himself that Meister was saved, that rabies was conquered. A month passed and he felt fairly sure; two months passed and he was certain.—David Masters (The Conquest of Disease).

## CALIFORNIA MEDICAL ASSOCIATION

EDWARD N. EWER, M. D., Oakland.....President  
W. T. McARTHUR, M. D.....President-Elect  
EMMA W. POPE, M. D., San Francisco.....  
.....Secretary and Associate Editor for California

The fifty-fifth meeting of the California Medical Association is in session as the May issue goes to press. Addresses of chairmen of sections and the minutes of the House of Delegates will appear in the June issue; the Council minutes and addresses of our invited guests, in the July number.

### ALAMEDA COUNTY

**Alameda County Medical Association** (reported by Pauline S. Nusbaumer, secretary)—The regular meeting was held March 15, 1926, President J. K. Hamilton in the chair. The following program was presented:

"Epidemiology of Smallpox," N. E. Wayson (by invitation). "Diagnosis and Treatment of Severe Smallpox," Arthur A. O'Neill (by invitation). "Administrative Application of Intradermal Methods of Vaccination," John Force (by invitation).

These papers were discussed by H. E. Foster, W. P. Shepard, F. L. Kelly, O. D. Hamlin, C. D. Sweet, A. A. O'Neill, and N. E. Wayson.

After adjournment refreshments were served.



### CONTRA COSTA COUNTY

**Contra Costa County Medical Society** (reported by S. N. Weil, secretary)—The monthly meeting of the Contra Costa County Medical Society was held on March 27, 1926, at the home of Dr. G. W. Sweetzer Martinez.

The society had the pleasure of listening to Dr. Dudley Smith of San Francisco, a councilor of the State Medical Society, explaining the workings of the society and the good work that the League for Conservation of Public Health is doing.

Attorney A. F. Bray of Martinez gave a splendid talk covering the high-lights of medical jurisprudence.

Doctor Rowell of Crockett introduced a resolution that the society support the Medical Reserve Corps and urging the members qualified to enroll. Seconded by Dr. Beard and carried.

A most delightful supper was served by Mrs. Sweetzer, and heartily enjoyed by those present.

Those present: Doctors Abbott, Blake, Beard, Carpenter, Keser, Merrithew, McCullough, Rowell, Weil, Dudley Smith, Mr. Bray.



### KERN COUNTY

**Kern County Medical Society** (reported by C. McLain, M.D., secretary)—The last monthly meeting was held at the Kern General Hospital, fourteen members being present. Dr. De Lappe, councilor of the Fourth District, was our guest and gave us an interesting talk on the different activities of the State Association. F. J. Gundry, M.D., F.R.C.S., Bakersfield, read an interesting paper, "Rupture of the Biceps Muscle," with a case demonstration.

At the time of the meeting there were ten cases of virulent smallpox with three deaths and another not expected to live. It is interesting to note that none of the virulent cases has ever been vaccinated.

Dr. Joe Smith, County Health Officer, and Dr. P. J. Cuneo, City Health Officer, Bakersfield, have conducted a free vaccination clinic, and at the time of this report about 2000 have been vaccinated.

## MARIN COUNTY

Marin County Medical Society (reported by J. H. Kuser, secretary)—A meeting of the Marin County Medical Society was held on March 25 at 8:15 p. m. The following members were present: Drs. G. M. Landrock, F. M. Cannon, C. W. Clark, W. F. Jones, R. G. Duffy, M. S. Edgar, and J. H. Kuser. The minutes of the last meeting were read and approved.

The chair appointed a committee consisting of Drs. W. F. Jones and J. H. Kuser to gather data on the medical history of Marin County for transmission to Dr. Emmet Rixford, chairman of the state committee.

Dr. George Willcutt was enrolled as a member of the society by transfer from the San Francisco County Medical Society.

R. G. Duffy read a paper on "Purpura Hemorrhagica" illustrated by microscopic slides which proved of great interest. A general discussion followed by the members present.



## SAN DIEGO COUNTY

San Diego County Medical Notes (reported by Robert Pollock)—Quite the outstanding feature of the past month was the meeting of the Southern California Medical Association in San Diego March 26 and 27. President Lyster and Secretary Sturgeon, both of Los Angeles, had provided a program fully up to the high standard set by this association. In addition to this, a contribution from the San Diego society was in the form of a clinical morning, Saturday, March 27, when the following hospitals presented clinics of distinct interest: Mercy Hospital, United States Naval Hospital, the San Diego County General Hospital, the Vaclain Hospital for Tuberculosis, the Scripps' Memorial Hospital, and the Scripps' Metabolic Clinic. As it is always the aim of this association in its regular sessions to cover the entire field of medicine and surgery, so in the clinics offered the same idea was carried out and a taste of everything was offered the scientific palate of the visitor. The following are suggestive of the menu: Surgical—General and Abdominal Surgery, Pelvic Surgery, Orthopedics, Urologic Surgery, Ear, Nose and Throat, Goiter Surgery; Medicine was represented by General Internal Medicine, Neurology, Pediatrics, Dermatology, Electrocardiography, and Radiography. The recently organized San Diego Gynecological and Obstetrical Society made its initial bow by presenting a very interesting dry clinic. Most of the leading clinical teachers of San Diego were in evidence at these clinics, and while space will not permit mentioning them individually, it is but just to say that San Diego is proud of their showing. Especial mention should be made of the courtesy of Captain Spear, Commandant of the Naval Hospital, who co-operated in every way possible with the local society to further the success of the convention, and the Medical Clinic held at his beautiful hospital was one of the chief drawing cards of the day. A pleasing feature of the clinics was the courtesy expressed by the management of the various hospitals in serving luncheon to all who attended.

The honor guest of the convention, Leonard G. Rowntree, M. D., Professor of Medicine of the Mayo Clinic, gave an excellent talk Friday evening on the various problems connected with diseases of the liver and kidney. Dr. Rowntree has an easy and convincing delivery, and speaks with the authority of the research worker and master of his art. Regrets were expressed at the inability through sickness of Dr. Dickson, Professor of Medicine at Stanford University, to be present as scheduled.

A side feature of the convention was the Golf Tournament held on the Chula Vista course which disclosed such talent among the medics of the Southland as should make our Northern confrères sit up and take notice.

The convention was brought to a close Saturday night with a meeting open to the public which was addressed by Rev. Howard B. Bard, D. D., who spoke on the relationship between religion and medicine. His address was largely a study in the psychology of the healing art, and was favorably received by a large audience. We hope to have this address published in the near future. About 300 medical men and women were in attendance at these meetings, and despite the crowded condition of the local

hotels at the week-end everyone was comfortably provided for.

On Thursday, April 8, Colonel Edward L. Munson, Surgeon of the Ninth Corps Area, Presidio, San Francisco, was honor guest at the County Society, the members of which he desired to meet. At the conclusion of the luncheon the Colonel formally presented to the society, on the part of the United States Government, a diploma certificate recognizing the splendid showing made by the San Diego society in completing the staff of Evacuation Hospital No. 90. As far as officer personnel is concerned, this hospital is ready for any emergency. It would be ungenerous on the part of the medical society in accepting this honor to fail to give full credit to Colonel A. E. Banks, M. D., M. R. C., through whose untiring efforts this organization was allocated to San Diego and manned by San Diego officers.



## SACRAMENTO COUNTY

Sacramento Society for Medical Improvement (reported by Bert S. Thomas, M. D., secretary)—Once again the magic date of March 17 came (the date of our organization in 1868) and with it the fifty-eighth annual banquet of the Sacramento Society for Medical Improvement, the oldest medical society in California. As ever, it is the most important gathering of medical men. Year in and year out the profession gathers professionally. Once a year, as has been the custom, we meet to learn that the man next to us is not all machine; we have the opportunity to meet John Smith, the man.

This year's "get-together" was held at the Del Paso Country Club, and saw forty of our membership in attendance. This host was swelled by a Marysville delegation, Roseville visitors; Colfax came to meet with us; San Francisco met us. At 8 p. m. younger men asked: "Who is that doctor?" and at 11 p. m. were bidding him, "Roy, bring Mrs. B. over to meet Mrs. R. at your first opportunity." All those petty jealousies that sometimes spoil our medical ideals and have no place among us are dissipated. This gathering was no exception, and the men present are to take a message to all those who were unfortunate enough to be able to attend. It will be as follows: "Don't miss No. 59 next year."

In the absence of our president, who was confined to bed, Nathan G. Hale presided. The toastmaster of the evening was our inimitable June B. Harris. Short and snappy messages were presented by the banquet committee and the officers. The Jones Trio (Charlie, Roy, and Norris) presided at the round tables. Del White and his "Six Montmartians" "orchestraed" throughout the evening. Soloists and dancing teams sung and flitted between the consommé "Schoff" and the "Reynolds" demi tasse (though some tell that Reynolds never saw his demi tasse).

We listened to notes of regret from Emmet Rixford, J. Wilson Shiels, Walter V. Brem, D. W. Montgomery, Howard Morrow, William Fitch Cheney, T. W. Huntington, Ray Lyman Wilbur, Stanley Stillman and Alanson Weeks, all speakers of previous years. That they could have been with us, is our sincere wish.

The Sacramento Society for Medical Improvement wishes to offer to every other society in the state one suggestion: Have a "get-together" banquet once a year. Medicine in California will profit by it.



## SAN FRANCISCO COUNTY

San Francisco County Medical Society (reported by T. Henshaw Kelly, secretary)—During the month of March, 1926, the following meetings were held:

Section on Medicine, Tuesday, March 2—Symposium on Amebiasis. Chronic human amebiasis—Luther M. Boyers, Berkeley, California (by invitation). Surgical therapy in amebiasis—Philip K. Gilman. Demonstration of the pathological lesions in amebiasis—Ernest M. Hall, Stanford University (by invitation).

General Meeting, Tuesday, March 9—Poisoning as seen in a large hospital—Gordon F. Hein. Emergency hospital treatment of cases of mercuric chloride poisoning—Ivan C. Heron. Poisoning by phenol and its com-



pounds—James M. Sullivan. Toxicological methods. Frank T. Green, City Toxicologist (by invitation).

Section on Eye, Ear, Nose and Throat, Tuesday, March 23—Relation of the arsenicals to the optic nerve—George N. Hosford. Relation of the arsenicals to the eighth nerve—Sigurd von Christiersen.

Section on Urology, Tuesday, March 30—Organization of the medical profession—Victor G. Vecki. Torsion of the spermatic cord—Thomas E. Gibson. Solitary cyst of the kidney—Clark Johnson (by invitation).



### SAN JOAQUIN COUNTY

San Joaquin County Medical Society (reported by Fred J. Conzelmann, secretary)—The stated meeting of the San Joaquin County Medical Society was held Thursday, April 1, 1926, at headquarters of the Local Health District, 129 South American Street. The meeting was called to order at 8:30 p. m., President H. S. Chapman, presiding.

Thirty-five were in attendance. Those present were: Drs. E. A. Arthur, E. L. Blackmun, H. J. Bolinger, C. A. Broaddus, H. S. Chapman, F. J. Conzelmann, J. V. Craviotto, A. E. Dart, J. T. Davison, J. F. Doughty, L. Dozier, C. F. English, N. B. Gould, E. C. Griner, L. M. Haight, S. Hanson, C. D. Holliger, H. E. Kaplan, W. P. Lynch, Grace McCoskey, R. T. McGurk, F. G. Maggs, B. J. Powell, D. R. Powell, G. H. Rohrbacker, G. H. Sanderson, J. A. Smither, C. V. Thompson, L. E. Tretheway, A. L. Van Meter, G. J. J. Vischi, N. E. Williamson, H. Q. Willis, and Harold Brunn and Dudley Smith as guests and speakers of the evening.

The minutes of the previous meeting were read and approved.

The application for membership of R. A. Buchanan of Lodi was read and referred to the Committee on Admission.

The Film Committee reported that it presented the film, "How the Fires of the Body Are Fed," to various high, grammar and private schools of this county, and that over 4000 students and pupils saw the film on March 4, 5, and 8. Drs. A. R. Powers of Tracy, R. T. McGurk and George H. Sanderson of Stockton, and C. B. Benson of Escalon, gave explanatory talks preceding the showing of the film.

A communication was read from the District Health Officer, Dr. J. J. Sippy, stating that a series of diagnostic chest clinics were held on March 11, 12, and 13. The California Tuberculosis Association co-operated by sending the following diagnosticians: Doctors Trimble, Bush, Owen, Iaane, Premising, Krout and Hart. Clinics were held in Stockton, Lodi, Tracy, and Escalon.

A total of 161 persons were examined. Of these, 101 were children under 16 years of age. Practically all of these were selected by local physicians. On the evening of March 11 the general topic of "Tuberculosis of Children" was presented to the St. Joseph's Hospital staff. Dr. Owen spoke on prevention, Dr. Trimble discussed diagnosis, and Dr. Bush talked on treatment.

The motion of Dewey R. Powell, seconded by George H. Sanderson, that the secretary send a letter of appreciation and thanks to each of the visiting physicians and also to Mrs. Edythe Tate Thompson, secretary of the California Tuberculosis Association, carried.

The motion of C. F. English, seconded by R. T. McGurk, that the president call a special meeting at a date between now and the regular meeting in June for the purpose of discussing local problems, carried.

The president introduced Harold Brunn, M.D., Professor of Surgery, University of California, who spoke on "Lung Surgery." Surgery of the lungs has only in the last few years made much progress. The slow advance in this field of surgery is probably due to the idea of "No life without breath." Surgeons hesitated to attack the lungs, for fear of collapse of the lungs and asphyxia; another great drawback was the high mortality rate in surgical treatment of lung abscesses. It is the modes of the treatment that have cut this mortality rate down. Many factors must be taken into account. Determine the vital capacity of your patient to withstand operation. A strong, robust patient will withstand better than one suffering from a lingering disease. The time at which the

operation is done is important. Prepare your patient, and choose an opportune time for operation. Successful lung surgery requires the co-operation of the surgeon, the internist, the bronchoscopist, and the radiologist.

Abscess of the lung often gets well by palliative treatment. Rest and postural treatment may do wonders for the patient; often the cough disappears. Bronchoscope may be used, not so much to apply medicine as to establish free drainage. Abscesses frequently result from the aspiration of infected material at time of removal of tonsils, or abscesses may result from the entrance of any foreign body in bronchial tubes, such as extracted teeth, or tacks and pins swallowed by children. Many of these abscesses require relief by surgical operation, and patients get well immediately. Embolic abscesses of the lungs do not respond so favorably to surgical treatment. Aspiration or foreign body abscess is entirely different from an embolic abscess, and note the difference implied in this distinction. In the latter the infected material is circulated in the blood stream; in the former the infection is localized. Do not forget the distinction; it concerns the interest of the patient—prognosis and treatment—the attempt to forecast the future, to remove the condition, or lessen the symptoms and prevent their return. The result of surgery is decidedly hopeful in the one, and always uncertain in the other.

Patients suitable for surgical treatment are those with a bad abscess in one lung and the other lung healthy or nearly so. The operation is done in stages; it is important to keep in mind that when the patient goes bad, stop and close the wound and do the operation some other time. Lung surgery has its ups and downs. When operations are successful indications for the operations increase, but when operations go bad the indications for them decrease. Tumors of the lungs may be removed by surgery. Cancer and malignant growths are rarely primary in the lungs; but if they are, a cure may be completely effected by operation.

Bronchiectasis may be cured by use of the cautery. Surgery also does much in pulmonary tuberculosis.

Dr. Brunn showed many x-rays slides of patients suffering from some forms of lung abnormalities. The slides illustrated the conditions that one meets and the problems that have to be solved in many cases much better than any amount of theoretical discussion.

The president introduced Dr. Dudley Smith, who spoke on the importance of the technic of rectal examination. He emphasized the careful routine rectal examination, and pointed out the great relief often obtained by the patients from the treatment of a simple pathological condition in this region. He discussed many of the common affections in the anal region and lower bowel, and suggested the treatment indicated in each condition. The doctor showed many good and valuable instruments for purpose of rectal examinations and treatment.

A general discussion of both papers followed, and important points were brought out and many questions answered by the speakers.



### SONOMA COUNTY

The Sonoma County Medical Society (reported by Guy A. Hunt, secretary) met in Petaluma Thursday, March 11. Twenty-four members and two visitors were present.

Frederic M. Loomis of Oakland gave a talk on "Sterility," and Victor G. Vecki of San Francisco talked on "The Organization of the Medical Profession in the United States."



### SANTA CRUZ COUNTY

The Santa Cruz County Medical Society met on Sunday, March 21, at "Riverwood," the home of W. E. Musgrave, at 11:30 a. m., with Saxton Pope of San Francisco guest of honor. There was a large attendance of members and visitors.

Saxton Pope, himself formerly a Santa Cruz County physician, entertained and edified the gathering with a discussion of some of his recent experiences in hunting big game with the bow and arrow in Africa. At the close of his address Pope was presented with a copy of Sir Arthur Kieth's "The Antiquity of Man" as a mark of the

appreciation, affection and esteem in which he is held by his friends. Buffet luncheon was served at 1 o'clock.

The next meeting of the society will be held in Watsonville Sunday, May 16, at 11 a. m. "What Santa Cruz Can Do to Decrease the Hazards of Child Birth" will be discussed by members and visitors. Luncheon will be served at 1 o'clock.



### SOLANO COUNTY

**Solano County Medical Society** (reported by John W. Green, secretary)—At the last regular meeting of the Solano County Medical Society Dr. Hale of Sacramento presented a paper on "Abscess of the Prostate," and Dr. Harris of Sacramento, a "Travelogue of British Hospitals."

The president of the Well Baby Clinic, sponsored by the Vallejo Women's Club, was also a guest of the society, and the work of the Health Center for the past year was reviewed, with a view to either recommending their activities or condemning them. After some discussion a committee was appointed to meet with the officials concerned with the conduct of the clinic and to work out some more scientific scheme which would be a benefit to all concerned. There were many obvious defects in the examination as it was being conducted and many criticisms of those who were taking part in its activities. The Solano County Medical Society had never endorsed their program previously, and it was felt in the society that any activity which so much concerned the physicians of the county as did the Well Baby Clinic should be more or less under our supervision.



### TULARE COUNTY

**Tulare County Medical Society** (reported by Horace G. Campbell, secretary)—The regular monthly meeting of the Tulare County Medical Society was held at Motley's Cafe in Visalia March 28, following dinner at 7 p. m.

The following were present: Members—Doctors Paine, Palmer, Ginnsburg, Tillotson, Banks, Preston, Edmunds, Lipson, Betts, Campbell. Guests—Dr. Ernest Falconer, Dr. F. R. De Lappe, and Mr. T. R. Brown.

The meeting was called to order at 8:30 p. m. by President Betts. The minutes of the last meeting were read and approved.

Dr. Fred R. De Lappe of Modesto, councilor of the State Society, then spoke on the activities of the State Medical Society. He discussed "Campaigning for Membership"; "Optional Medical Defense"; and "League for the Conservation of Public Health."

Ernest Falconer, M.D., of San Francisco then addressed the society on "Splenic Enlargements as Associated with Anemias."



### YOLO-COLUSA COUNTIES

**Yolo-Colusa Medical Society** (reported by John D. Lawson, secretary)—The last meeting of the Yolo Colusa Medical Society was held in Colusa for the first time in history on February 3, 1926. The following was the evening's program:

"Grading of Malignancy," by D. Schuyler Pulford. "Significance of Blood Pressure During Pregnancy," by W. J. Blevins. "Chest Surgery," by E. E. Larson.

Officers are as follows: J. Edward Harbinson, M.D., Woodland is president; George W. Desrosier, M.D., Colusa, vice-president; John D. Lawson, M.D., Woodland, secretary-treasurer; and Fred R. Fairchild, M.D., Woodland, delegate.

D. Schuyler Pulford was accepted as new member. Dr. Pulford is lately of Mayo Clinic and has recently been appointed on the medical staff of Woodland Clinic as associate in medicine, pathologist and director of clinical laboratory.

The transfer of Middleton P. Stansbury of Vacaville from Solano County Society was accepted.

It is reported that Dr. Earl Harlan of Colusa has been

sentenced to three years in the federal prison for violation of the Harrison Act.

There has been an epidemic of smallpox, with about twelve cases in Woodland in the past month.

Yolo-Colusa County adopted the following resolution: Whereas, the United States Army is requesting that certain qualified members of the medical profession apply for commissions in the Medical Reserve Corps, and whereas it appears that this action is necessary to assure the protection of this country in time of invasion or war, be it

Resolved, That the Yolo-County Medical Society advocate the application for commissions in the Medical Reserve Corps by its various members qualified to serve.

### CHANGES IN MEMBERSHIP

**New Members**—Leopold H. Fraser, Richmond; Ernest E. Kessler, Sonora, Mexico; Francis P. Wisner, Chowchilla; Frank P. Topping, Sacramento; Charles A. Wylie, Charles N. Greusel, San Bernardino; Charles G. Curtis, Oran I. Cutler, Christian A. Nies, E. A. Nelson, Orlyn Pratt, Mosser G. Taylor, Floyd Lee, A. A. Steele, Loma Linda; Fraser L. Macpherson, F. W. F. Wieber, San Diego; Frank H. Rodin, Walter Schilling, San Francisco; Harvey H. Whitney, Burlingame; Allen K. McGrath, Sonoma; Frank Chilton, Joseph C. Cuneo, Russel Kapp, San Jose; Marie A. Vachout, San Martin; John R. Williams, Palo Alto.

**Resigned**—Charline A. Smith, Los Angeles; Elmer J. Chesbros, Gilroy, Calif.

**Transferred**—Horace A. Hall, Los Angeles County to Riverside County.

Frank Y. Kitsuda, San Francisco County to Alameda County.

George H. Willcutt, San Francisco County to Alameda County.

John M. Gardner, San Joaquin County to Santa Cruz County.

**Deaths**—Hotchkiss, Lucius Wales. Died at Santa Barbara, April 11, 1926, age 67. Graduate of Columbia University College of Physicians and Surgeons, New York, 1884. Licensed in California in 1919. Doctor Hotchkiss was a member of the Santa Barbara County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Zaiser, Albert Charles.** Died at Santa Ana, April 4, 1926, age 53. Graduate of St. Louis College of Physicians and Surgeons, Missouri, 1897. Licensed in California in 1920. Doctor Zaiser was an honorary member of the Orange County Medical Society, the California Medical Association, and the American Medical Association.

**Report of the Therapeutic Research Committee of the Council on Pharmacy and Chemistry**—During the past year the committee has concentrated its work on the support of investigations carried out in schools and laboratories of recognized standing by supporting investigations for which small grants were needed to purchase material and apparatus. Fourteen eligible problems of high quality were submitted.

The committee appropriated \$2375. Six papers were published during the year, and a number are almost ready for publication.—Journal A. M. A., 1926.

In the examination of children in the Scanlon School of Chicago by the Tuberculosis Association of that city "40 per cent were found to have defective vision," though "only 7 per cent were urgently advised to have their eyes cared for." It has long been known that not more than 2 per cent (if that many) of eyes are anywhere near perfect. Are we to infer that the Chicago children have such superior vision? But why should only seven out of a hundred be cared for?—Medical Journal and Record, March 17, 1926.

The mind, in discovering truth, acts in the same manner as it acts through the eye in discovering objects; when once any object has been seen, it is impossible to put the mind back to the same condition it was in before it saw it.—Thomas Paine.



## UTAH STATE MEDICAL ASSOCIATION

T. C. GIBSON, M. D., Salt Lake City.....President  
W. R. CALDERWOOD, M. D.....President-Elect  
FRANK B. STEELE, M. D., Salt Lake.....Secretary

J. U. GIESY, M. D., Kearns Building, Salt Lake,  
*Associate Editor for Utah*

### MAN AND HIS ILLS

There is truth in the statement that most of our troubles are brought upon us by our own acts—our own disobedience to laws. Laws of man or laws of nature, the rule still applies. And it is equally true that in his physical functions, his disregard of the welfare of others, the average man is a rather filthy beast, apparently overlooking, even in his attempts at cleanliness, anything but the benefit to his individual self.

More particularly we refer to the water supplies—the necessity for constant chlorination, made a necessity by the very acts of the people by whom a water supply is imbibed.

Years ago, as a child, I heard a rhyme, more forceful than elegant, yet pointing a moral by its very force. Somewhat expurgated for the sake of delicate ears, it went thus:

The fly flew into the grocery store,  
A place he had often been before.  
He specked on the sugar,  
He specked on the ham.  
He didn't give a damn for the groceryman.

And this tells all about the fly, from a sanitary standpoint, regardless of the finer distinctions of how many pathologic organisms may find lodgement on the feet of a fly. Because, aside from the fact that the insect may accumulate and convey many such organisms in its transits, the mere fact of the excretory filth left by it upon foodstuffs always seemed enough to point the moral of a fly-swatting crusade to us. Yet in what major sense are we better than flies ourselves?

Not discounting too greatly recent English claims that typhoid is due in a greater measure to oysters and "plaice"—that small fish which they have the toothsome habit of frying and selling ungutted from commercial stalls—we still feel that, in America, at least much of it is water-born, and that for that water-born menace we are to blame past any other cause.

Reformers today are prone to blame the automobile for a large percentage of individual delinquency. We are not going to argue the point. But we are going to claim that, since the automobile has placed within easy reach the beauties of stream and canyon and countryside of which we rave, the menace of water-born typhoid has been on the increase. And the reason is easy to find if we seek it. It is the same impeachment that was written against the fly. We are fouling our streams by our own—as it really seems—indifferent acts in "specking" our countryside and our canyons and hence our streams with our own bodily excrements.

It isn't a pleasant thought—not even as pleasant as that of a fly speck on a piece of the groceryman's

ham—but it is a very pertinent and a rather important thought. And the remedy is, of course, within our own hands. We laugh at an ignorant native washing himself in his stream. But wherein is the result any different if we foul the watershed and then let the results of our dereliction be washed into the stream by the natural agencies of drainage? As a matter of fact, no difference exists, save that the one ignorant of the laws of sanitation is *trying* to be cleanly, while we, knowing far better, are not doing better. It would appear that a wider and a more stressed education of the public upon this point should be put into effect. To us it appears that here is a very urgent item for the attention of the agents of public health.

The 1926 Annual Session of the Utah Medical Association is being held in Salt Lake as we go to press, following out the program published in the April issue. The proceedings will be published in full in succeeding issues of CALIFORNIA AND WESTERN MEDICINE.

Utah News (reported by J. U. Giesy)—Colonel E. L. Munson, Ninth Corps Area Surgeon, with headquarters at the Presidio of San Francisco, was entertained at dinner by the Medical Reserve officers of this section Sunday, April 11.

In addition to about sixty Medical Reserve officers, Brigadier-General L. R. Holbrook, commander of Fort Douglas, and Colonel Paul H. McCook, chief of staff of the One Hundred and Fourth Division, reserves, were present as guests. The arrangements were in charge of Colonel Willard Christopherson of the Reserve.

The Committee of Health and Legislation reported on their four months' investigation of the Utah Health Association, which is the organization having charge of the sale of Christmas health seals, on the night of April 26. This report was exhaustive and carried full record of the investigation made and recommendations concerning the further activities along state health campaigns against tuberculosis.

The repeat program delivered by the Medical Reserve officers at Ogden last month for the purpose of stimulating interest in the M. O. R. C. in Weber County was a great success. The visiting medical officers from Salt Lake were entertained at dinner, and afterward the program previously given before the Salt Lake Society was carried out.

At the Weber County Society meeting a most gratifying response was received in the signing of some thirty applications by the Weber County physicians for admission to the Reserve Corps. This is one of the best bits of work the medical reservists of Utah have put over. When it comes to supporting the Defense Act, Utah is surely on the map.

Major S. C. Gurney, One Hundred and Fourth Division, entertained Colonel E. L. Munson, who is here on inspection at a dinner, given for an invited list of Reserve officers and other guests from Fort Douglas Monday night, April 12.

The Advisory Committee, Medical Department, University of Utah (Francis Goeltz, chairman) met at the Medical Building April 28, and after a tour of inspection of the various medical departments, under the guidance of members of the University medical staff, luncheon was served to the inspecting members by the University.

Salt Lake County Medical Society, March 22, 1926 (by M. M. Critchlow, secretary)—President F. H. Raley, fifty members and forty-eight visitors, including nurses and sisters, were present at the meeting held at Holy Cross Hospital March 22.

The program was arranged by members of the hospital staff. Fuller B. Bailey reviewed a case of gastric lues. Sol G. Kahn presented a case of possible exophthalmic goiter in a child 13 years old. George A. Cochran presented a case of locomotor ataxia. J. U. Giesy pre-

sented a patient who had a fistula in the lumbar region following resection of a rib for osteomyelitis. A. J. Hosmer discussed the diagnostic points in psoas abscess. Leo Miltner, in the absence of J. J. Galligan, presented a case of fracture of the femur complicated by a severe burn. Park Tuttle presented a patient who had recovered from multiple perforations of the bowels from gunshot wound. L. N. Ossman presented a patient with anterior dislocation of the semilunar bone following an injury in 1918. W. G. Schulte presented a case of prostatism operated with good results. E. F. Root presented a patient with a congenital anomaly of the genitalia.

Following the meeting refreshments were served by the management of the hospital.

**Meeting of April 12**—President F. H. Raley, forty-four members and eleven visitors were present.

A. A. Anderson presented a case of purulent pericarditis, drained, with complete recovery. Mr. Thody showed lantern slides illustrating the condition at various stages as revealed by the x-ray. Discussion by G. G. Richards. A. A. Kerr presented a case of fracture of the tibia and fibula in which a bone graft was done on the tibia with perfect results.

L. E. Viko's paper dealt with cardiac neurosis associated with organic heart disease. He compared a series of cases of heart disease without neurosis, a series of cases of neurosis without heart disease, and a series of the two conditions combined. He dealt with the symptoms, etiological factors, treatment and results of treatment. Discussion by G. G. Richards, G. H. Pace, and John Z. Brown. E. R. Murphy in his paper, "The Cardiac Child, with Special Reference to Functional Cardiac Capacity," discussed the various methods of determining the cardiac capacity, stressing the vital capacity. And illustrated the usefulness of simple tests in the treatment of cardiac diseases in children. Discussion by Helmina Jeidell and Smith of Ogden.

The application for membership of J. C. Stocks was read and referred to the Board of Censors. President Raley announced that the Salt Lake County Dental Society has issued an invitation to members of the medical profession to attend their meeting April 20, when there will be a debate upon on the following question: "Resolved, That all pulpless teeth should be extracted."

**Acacia and Intravenous Injections**—The harmfulness of acacia in the treatment of shock and hemorrhage has been pointed out repeatedly. The changes resulting from the use of this otherwise inert agent bear on the many-sided question of intravenous therapy. The investigations of Hanzlik have shown the wide changes which occur in the blood and tissues. Confirmatory of the work of Hanzlik it was found that the blood after injection of acacia is definitely altered. The danger of intravenous injection of acacia has been fully demonstrated. The warning against acacia may be extended to other blood substitutes, and in fact to intravenous injections in general.—Journal A. M. A., February 20, 1926, page 556.

**Recresal (Propaganda for Reform)**—It is claimed to be "highly efficient, corroborative for the sick, convalescents and those in need of recreation," and "specially recommended in cases of weakness and exhaustion of a physical and psychic nature, in bodily and mental over-strain; indispensable for the preservation of the tone of muscles and nerves." Tests made in the A. M. A. Chemical Laboratory show that sodium acid phosphate is the essential constituent. Therefore, the claims made for the product are preposterous.—Journal A. M. A.

The average graduate of today is a better informed doctor than the average a generation ago. There is no doubt that patients today are being cared for by physicians with better general training than ever before. The hospital with its close professional contact in daily routine and in attendance at staff meetings affords the general practitioner a means of becoming a broader man and keeping up with progress in medicine.—Minnesota Medicine.

## NEVADA STATE MEDICAL ASSOCIATION

A. J. HOOD, M. D., Elko.....President  
HORACE J. BROWN, M. D., Reno.....  
.....Secretary and Associate Editor for Nevada

**Washoe County Medical Society** (by J. A. Fuller, secretary)—The April meeting was held in the residence of S. K. Morrison, Reno, April 13.

Mrs. M. H. Patrick, manager of the Nurses' Directory, communicated her appreciation of the support given by the physicians to the recently organized register.

Dr. Tees suggested the advisability of forming a similar directory for doctors, whereby calls could be received during the doctor's absence and an effort be made to locate him. Tees was appointed a committee of one to see Mrs. Patrick in regard to the matter, and report at the next meeting.

Owing to the large number of prospective papers to be read at the annual session of the Nevada Medical Association, Dr. Muller suggested that the meeting be extended to three days. This suggestion did not meet with general favor.

Mr. W. E. Barnard presented a plan for a new office building to be known as Physicians' and Dentists' Building, providing a sufficient number of doctors would go into it, and offered to arrange, free of charge, an assembly room large enough for meetings and the use of a projection lantern; also to maintain a library room for our use free of charge. The matter was tabled until more consideration could be given it.

S. K. Morrison read a paper on "Periodic Health Examinations." He pointed out that this movement was originally started twelve years ago, by a private lay corporation, and was either fostered or shortly after backed by the insurance companies. Four years ago the American Medical Association took up the matter to get it out of the hands of the laymen, and issued a pamphlet of instruction for physicians making such examinations. Morrison discussed the advantages and disadvantages of such activity in this community, and felt that we should proceed with it very cautiously. In discussing the paper, A. J. Hood thought we would be trying to force an unwelcome measure on the people. Piersall spoke in favor of the movement, citing the fact that in several towns in Nevada the physicians are already making free examinations of children. Richardson resented the idea of the physician having to be trained and passing an examination himself before examining others.

The free clinic in the city, which is being fostered by lay organizations, was discussed. No formal action was taken, but it was the consensus of opinion of all members present that the necessary charitable work was being adequately taken care of and that a free clinic in this community was unnecessary and undesirable.

Albert, on behalf of the society, thanked Morrison for opening his home (Mrs. Morrison was out of town) to the society. The rest of the evening and part of the morning was spent in enjoying the famous Morrison hospitality.

**An industrial physician has been defined by the Conference Board of Physicians in Industry as follows:** "A physician in industry is one who applies the principles of modern medicine and surgery to the industrial worker—sick or well—supplementing the remedial agencies of medicine by the sound application of hygiene, sanitation and accident prevention, and who in addition has an adequate and co-operative appreciation of the social, economic, and administrative problems and responsibilities of industry in its relation to society."—W. Irving Clark, Canadian Medical Association Journal.

"What makes you look so fatigued?" was asked of a withered-up little man. "Well, it's like this," he replied. "My wife is walking to reduce, and the only time she can do it without attracting the attention of the neighbors is in the evening. She then insists that I go along, even if I'm tired. The past two weeks I have lost eight pounds, and she has gained two ounces."—The Outlook.



## MEDICAL, HEALTH AND HEALTH AGENCY NEWS

**Mercy Hospital, San Diego** (reported by Robert Pollock)—At the March meeting of the staff of Mercy Hospital important discussion of salient points of hospital betterment was entered into by many of the members. This free interchange of views as to how things should be done are of great value in improving the service in our hospitals. Clarence Rees presented two very interesting cases of intracranial pathology, with operative treatment and results.

T. O. Burger reported a case recently operated with the removal of a considerable portion of the lower ileum, which presented extensive and deep ulcerations apparently brought about by the ravages of ameba dysenteriae. Discussion became rather general and spirited upon all of these presentations. Nothing could be more encouraging than the earnest and spirited way in which the physicians of the various hospital staffs enter into the discussion of the clinical cases reported; it suggests that the theory of medicine never touches the live interest of the physician as does the everyday problems of applied medicine.

On Tuesday, April 6, the conjoined staffs of Mercy Hospital, the County General, and the Scripps Memorial met in the auditorium of Mercy Hospital to discuss with J. B. Tyrrell, special representative of the American College of Surgeons, to discuss with him important matters relative to hospital betterment, various details of history-taking and filing and other important subjects were gone into, and the large number called forth on short notice felt amply repaid for attending. These visits from time to time by representatives of the College of Surgeons are distinctly stimulating to the higher ideals and better service in hospital work.

**Franklin Hospital, San Francisco**—The regular monthly meeting of the Franklin Hospital Clinical Society was held on Monday, March 29, 1926, in the auditorium of the hospital, George Becker, secretary.

Several cases of neurosurgical interest were presented by Howard Fleming, after which a very instructive discussion followed. The first case was one of extradural hemorrhage with fracture of the skull resulting in a left hemiplegia. Second, a case of fractured skull with displacement of the vault followed by convulsions of a typical Jacksonian nature. Third, fracture of the third cervical vertebra, with dislocation causing a typical Brown and Sequard syndrome. The displacement was reduced by the Taylor maneuver, with marked improvement in the Brown and Sequard symptoms. Fourth, resection of the anterior and posterior roots of the segments of the fourth, fifth, sixth, seventh, and eighth cervical, and first and second thoracic spinal nerves for amputation pain in the arm with marked improvement. Fifth, were a group of periphery nerve cases following injury: (1) a muscular spiral nerve injury. A surgical union was made by placing the distal and proximal ends of the nerve together anterior to the humerus; (2) a case of sciatic palsy, due to dislocation of the head of the femur. The operation showed an injury to the sciatic nerve at the sciatic notch.

Following the discussion, refreshments were served in the hospital dining-room.

**St. Joseph's Hospital Staff, San Francisco**, met April 7, A. S. Musante presiding, and discussed arteriosclerosis. R. M. H. Berndt read a paper on "Clinical Types of Arteriosclerosis," the following points being noted:

Senile arteriosclerosis is but a phase in the cycle of life—the retrogressive one. Palpable, tortuous, sometimes calcareous arteries with gradual decay of physical and mental power are usual. Without complication it means euthanasia.

Presenile arteriosclerosis is a diseased process, cutting down the usefulness or life of man at an early stage, when he should be still of the greatest value on account of ripe experience and judgment. The last two Presidents to die were victims of arteriosclerosis. This disease process is more disseminated than generalized, with constant tendency to spread. The arterial lesion produced by it leads to sclerosis of the viscera. The organs affected undergo changes and lose their capacity for work, not receiving proper blood supply. Arteriosclerosis also renders the smaller vessels prone to spasms with ischemia, pain and loss of function. The final stage of arteriosclerosis leads to endarteritis obliterans with necrosis, as seen in the brain or intermittent claudication.

Three types of arteriosclerosis are distinguished: first, the nodular, in the aorta and large branches, particularly at or near the orifices of branching vessels. The nodules when breaking down form atheromatous abscess or ulcer, not to be confused with simple atheromatous plaques frequently found and of no significance; second, the diffused kind in the middle or smaller branches, leading to destruction of muscular and elastic fibers in the middle coat with replacement of connective tissue; and, third, the syphilitic. Causes of arteriosclerosis are wear and tear of life plus heredity; infectious disease, especially syphilis; intoxications (lead, gout, diabetes, kidney disease, and obesity); hypertension; and toxic products in the process of intestinal or paraenteral digestion and in the biochemical process of metabolism, probably the most frequent and important causative agent.

Arteriosclerosis has no symptoms of its own. It is the commencement of a subsymptomatic process, the first manifestations being the functional disturbances of the affected organs. The heart stands the brunt of the battle. Hypertrophy is the elementary change. Valvular aortic disease, auricular disturbance, as auricular fibrillation or flutter, angina pectoris, and coronary involvement, leading to myocardial changes, follow. Other clinical symptoms are neurasthenia (often present), insomnia, disturbance of digestion, sometimes with pain, precordial pressure, dyspnoea, loss of fatigue sense with inability to relax, eye symptoms, often early, and tinnitus, a frequent symptom. Early diagnosis is just as important as in tuberculosis.

Philip King Brown opened the discussion, as follows: The usual manifestations of arteriosclerosis as observed in the Southern Pacific Hospital include Ayerza's disease, a stenosis of the pulmonary artery from sclerosis of its wall and branches, the chief symptoms being cyanosis and edema of the lungs, with marked disturbance of the breathing; Buerquer's disease and obliterating endarteritis of the vessels of the extremities, described first among the Russian and Polish Jews in New York. We had one case markedly benefited by no treatment except small doses of salvarsan. After several injections he felt at least 50 per cent improvement. We have had some evidence of the relation of arteriosclerosis to ulcer of the stomach and duodenum as observed at operation. We have tested out all suggested causes of essential hypertension with and without evident arteriosclerosis, without being particularly impressed by any. The uricacidemia suggested by Fishberg as a cause we could not substantiate. The occurrence of cholesterol in excess in its relation, not only to arteriosclerosis, but to cirrhosis of the liver, has attracted our attention. We have tried liver extract in reducing blood pressure, but do not find it of any advantage, as the pressure rises promptly after the extract is discontinued.

L. B. Crow supported the idea that the location of the preliminary lesion was in the intima of the vessels instead of the media.

R. H. Dunn spoke on the service offered by the Community Chest for helping nursing mothers when they leave the hospital, and it was voted to have St. Joseph's Hospital utilize the same.

Case histories were presented by Frank Sheehy (gastric cancer, following ulcer, and myelomata), C. R. Drader (carcinomatosis), and Samuel Barmak (pneumococcal meningitis and pernicious anemia).

Patients were demonstrated by Frank Lowe and Roy

Parkinson with fractures of the arm and forearm and arteriosclerosis of the retinal vessels, respectively.

The program for May 12 follows:

"Malignant Splenomegaly," T. B. Bodkin; "Blood Picture in the Acute Abdomen," Walter Smith; "Recent Experiences With Mercurochrome," William Quinn; and "Medical Progress—Echoes of the A. M. A. Meeting," W. T. Cummins.

At a recent meeting of the St. Francis Hospital Clinical Society, San Francisco, goiter surgery was discussed by Wallace I. Terry; demonstrations of pathological specimens were given by A. M. Moody.

The Women Physicians' Club of San Francisco (reported by Edna L. Barney, secretary)—A more concerted action by medical women has long been desired, not only for the advancement of medical service, but also for a prompt expression of cordiality to visitors in our city who have achieved renown in some line of medical work.

The Women Physicians' Club was inaugurated December 11, 1925. It was fortunate in having been organized in time for the members to meet Josephine Baker of New York as their club guest. The fine professional and personal attitude of Baker toward medical women deeply impressed the club members and caused them to realize a delightful satisfaction in their organization.

The Women Physicians' Club now has ninety-three paid-up members, and with a feeling of assurance for a permanent organization has, under the guidance of its president, Louise B. Deal, joined the California Federation of Women's Clubs.

It is of special interest that the federated clubs, representing more than 70,000 women, have chosen the leadership of Mariana Bertola, and so things medical, both civically and legislatively, which are of particular interest to women, have a very promising outlook. The members of the Women Physicians' Club aim to give all possible help to Bertola in her important work.

To medical men we wish to say: The Women Physicians' Club fosters no spirit of antagonism; clearly we see the true nature of a common cause for general well-being.

Amid the present heated debates and highly colored propaganda devoted to the subject of law and law enforcement it is refreshing to see an organization quietly taking steps for the prompt and effective punishment of those persons who persist in defying the mandates of the people as expressed through the law.

During a three-day session in Los Angeles of the State Medical Board, which came to a close yesterday, that body revoked the licenses of several physicians who had been proven guilty of law-breaking, suspended others, and placed yet others on probation, depending upon the gravity of the offense in each case. In the latter case, the first false move of the guilty parties means the immediate revocation of their licenses to practice in this state.

These steps were taken in order to rid the medical profession and the public of doctors who unlawfully sell narcotics, wrongfully dispense liquor under the guise of their profession or who otherwise deport themselves in a manner unbecoming to the responsibilities with which they are intrusted.

It is especially significant that these cases were all disposed of within three days. Contrary to the practices in our courts, there were no long delays resulting from technicalities; no deferred sentences or legal loopholes by which the culprit could escape punishment.

Law enforcement undertaken in such a manner is certain to be more successful than is the case where all manner of excuses and delays are permitted to wield their influence.

The members of the State Medical Board are to be congratulated upon their efforts to promote the public interests, and it is to be hoped that some of their promptness and efficiency in such things will be transmitted to our courts in the effort to suppress the criminal.—Hollywood Citizen, March 13, 1926.

At the regular meeting of the California Board of Medical Examiners held in Los Angeles March 8 to 11, inclusive, an unusually large number of hearings were held in the instance of licensed individuals charged with violation of some provision of the Medical Practice Act, and the following action was taken:

Herbert Bogue, March 11, 1926, certificate revoked. (Violation of State Poison Law re narcotics.)

Charles K. Holsman, March 9, 1926, certificate revoked, based on conviction of violation of the United States postal laws.

Frederick K. Lord, March 9, 1926, certificate suspended one year. (Habitual intemperance.)

Robert W. Renwick, March 11, 1926, certificate revoked. (Aiding and abetting an unlicensed practitioner.)

William A. Strole, March 10, 1926, certificate revoked. (Violation of State Poison Law re narcotics.)

Ludwig H. Wolfson, March 9, 1926, certificate suspended one year. (Violation of State Poison Law re narcotics.)

Of interest to physicians, and more especially to otologists and rhinologists, will be the announcement that the American Association for the Promotion of the Teaching of Speech to the Deaf will convene for a five-day session in San Francisco on July 5, 1926, in the auditorium of the Pacific Heights public school.

The problem of those deaf children to whom medical and surgical science cannot give absolute relief is one which touches closely the conscientious physician, for he is quite frequently called upon to give advice as to an educational program for such patients.

If he is conversant with the possibilities for training, there is the chance for his invaluable co-operation with the state and local boards of education, whose task it is to bring to parents an understanding of the necessity for an early entrance into the proper schools, so that the process of overcoming the handicap of deafness may not be unduly delayed.

Professor Brouwer of Amsterdam was the scheduled speaker for the meeting of the San Francisco Academy of Medicine on May 1. Subject: "The Projection of the Retina on the Brain."

The meeting of June 26 will be addressed by George W. Holmes of Boston. Subject: "Lymphoblastoma, Its Various Manifestations and Treatment."

The Morris Herzstein Lectures on Diseases of the Pacific Basin were given by Henry S. Houghton, the director of the Peking Union Medical College on the evenings of Monday, April 26, and Wednesday, April 28, at Lane Hall.

The first lecture was a discussion of the setting of western medicine in Asia, and its significance in the promotion of international well-being from various points of view. The second lecture was a more detailed and specific talk on nosogeography and on the work that is being done in China.

It is unfortunate that the dates of these important lectures were in conflict with those of the California Medical Association meeting in Oakland.

Stanford announces that Frederick Leet Reichert of Johns Hopkins has been appointed Associate Professor of Surgery in the Stanford Medical School, beginning with the year 1926-27.

The Stanley P. Black Memorial Lectures were delivered this year on March 19 and 20 in Memorial Hall, Professional Building, Pasadena, by A. S. Warthin, Professor of Pathology, University of Michigan. Subjects: "The Nature of the Susceptibility of Cancer," and "Syphilis of the Heart and Aorta."

Friends of Doctor Edgar L. Gilcreest deeply sympathize with him in the loss of his father, Dr. J. Edward Gilcreest, who died at Ennis, Texas, March 18, aged 75. Doctor Gilcreest was known throughout Texas and Oklahoma as a pioneer physician and educator, and his counsel was sought far and wide by the younger physicians. He was the oldest living alumnus of the Louisville Medical College.



## READERS' FORUM

Selected short letters and abstracts from longer communications from readers are published when they remain within the bounds of decorum and law and contribute anything of value. Hereafter the name and address of the writer will be given. A pen name will be published on the author's request, and letters to the editor not intended for publication should be marked "personal."

April 9, 1926.

TO THE EDITOR:

If CALIFORNIA AND WESTERN MEDICINE will in the future be bound by sewing it will have about reached the acme of perfection and will materially contribute to my spiritual development, for I cannot refrain from swearing when I open a magazine bound by stapling.

I subscribe to some thirty medical and other magazines. The comfort derived in opening, e. g., "The American Journal of Psychiatry," "The Journal of Abnormal and Social Psychology," "The International Journal of Psychoanalysis," "Mental Hygiene," "American Mercury," et setera, in comparison to the stapled "Journal of the American Medical Association," "The Psychoanalytic Review," "Endocrinology," "International Studio" (otherwise beautifully done up), and many others cannot be expressed. To enable me to read with equanimity the stapled magazines I invariably take the staples out before I read them (I keep two sets of tools for this purpose, one in my office and one on my library table at home). This takes time, and in performing the delicate operation I often injure my fingers and have to run for the tincture of iodine bottle. You must admit this is a great nuisance. Therefore, by all means continue to bind CALIFORNIA AND WESTERN MEDICINE by sewing.

San Francisco.

C. RENZ, M. D.

Sacramento, April 10, 1926.

I much prefer the binding used in the April issue of CALIFORNIA AND WESTERN MEDICINE.

C. I. TITUS, M. D.

Occidental, California, April 11, 1926.

TO THE EDITOR:

In my opinion the binding (sewed) of the April issue of CALIFORNIA AND WESTERN MEDICINE constitutes an improvement. I have frequently noticed that the wire stapling of some of our journals gets into such a condition as to be dangerous from scratching the fingers of those who have to handle them. At least it is painful or uncomfortable. Then also the furniture of our homes and offices is apt to suffer from the same cause. The new way makes reading more easy and pleasant. The book becomes docile, as it were. It will stay where one puts it without showing fight. It can be easily conquered with one hand. It is a credit to all concerned.

Most gratefully in the cause of medicine,

R. FORREST, M. D.

Los Angeles, April 10, 1926.

TO THE EDITOR:

There is no possible comparison between stapling and stitching in the interpreting value of a magazine. Hereafter, if I was interrupted in reading an article in CALIFORNIA AND WESTERN MEDICINE it took me precious minutes to find my place again. Now I can lay the magazine down and find it as I left it when I wish to take up the reading again. It certainly is a great improvement.

ELMINA FARQUHAR COOK.

DEAR EDITOR:

In your April issue you have a little symposium on bedside medicine, with the subject of whooping cough as the theme. In the articles seven physicians take part. Dr. Myrl Morris speaks of the effects of intramuscular injections of ether, but does not indorse the treatment very strongly.

I am not supposed to be a general practitioner, but in

the last six months I have had five children whom I have looked after with this dreadful disease. Two of them were certainly very bad with the disease and showed the evidences of exhaustion which is a part of the disease. In all these five cases I used the intramuscular injections of ether in the abdominal wall. The ether left no necrotic spot, no evidences of physical injury. I began with about twelve drops, repeating the dose the second time to fifteen drops, and the third dose to about twenty drops. There was a rapid amelioration of all the symptoms from the first. In all these five cases the mothers pronounced the children completely cured. The whoop was eliminated and the accompanying bronchitis quickly disappeared. The doses were given at four or five-day intervals. The response was magical.

I am aware that five cases does not constitute much of a basis from which to form an opinion. But in common with other practitioners, and having had over a third of a century experience in some of the commoner things of medicine, I wish to say that no more vaccine, bromides, codia, or any other empiric medicine would be given by me in treating one of the outstanding plagues of childhood, and such a plague I consider whooping cough to be.

I hope those who read these lines will try the ether as I have outlined in their cases of whooping cough, and I should like to hear from them through the columns of this magazine what their results were.

THOMAS W. BATH, M. D.

Reno, Nevada.

Ambassador Hotel, Los Angeles, March 25, 1926.

TO THE EDITOR:

Enclosed please find a postoffice money order for which I would thank you to send a copy of the December, 1924, issue to each of the following names and addresses: Mark G. Harris, Ambassador Hotel, Los Angeles; Dr. J. J. Monohan, 25 East Washington Street, Chicago; Dr. A. Schram, Monroe Building, Chicago; Dr. Francis McNamara, Savings Bank Building, Chicago.

I also request you to please mark the William Fitch Cheney special article as listed on the front cover, so my doctor friends will know the particular article I want them to look over. I think it the "best ever."

MARK G. HARRIS.

Letters like this help expand the growth and influence of western medicine and are valuable to individual doctors.

Martinez, California, April 10, 1926.

TO THE EDITOR:

I have just looked through the April issue of CALIFORNIA AND WESTERN MEDICINE to see your comments on what was said and done at the recent meeting of the Building Trades Council at Marysville in regard to medical and surgical work in industrial accidents, and failed to find any news whatsoever.

Inasmuch as they agitated a change in the industrial accident laws, accused certain doctors of collusion and perjury, and advocated these changes through the initiative or by pledging the candidates to the legislature in advance, and as this talk was by one of the most important of the state labor bodies, I think it worthy of some notice in our magazine.

I have heard this meeting spoken of by labor leaders and by many doctors, and I think that lack of notice by CALIFORNIA AND WESTERN MEDICINE, representing the State Medical Association is entirely wrong.

I do not know much else on this subject than what I have written here, but as this has been given rather wide publicity and was in the daily press, you are, or should be, well acquainted with the facts. I certainly think this matter of much more importance than some of the news you publish.

JOHN BEARD, M. D.

Dr. Beard's note is the only information we have received about the meeting to which he refers. Even our newspaper-clipping service failed to cover the story. As Dr. Beard says, information about activities in industrial medicine often constitute medical news of value to physicians which we are glad to publish when we can get it.

San Francisco, April 18, 1926.

TO THE EDITOR:

Just a line to say that I prefer sewing CALIFORNIA AND WESTERN MEDICINE instead of stapling as heretofore.

EWALD ANGERMANN, M. D.

University of California Medical School,  
April 13, 1926.

TO THE EDITOR:

I wish to thank you again for the interest you have taken in the experiment in medical education carried on at the University of California Medical School and for the excellent presentation of it in the April number of CALIFORNIA AND WESTERN MEDICINE. The article has proved of interest to members of our own faculty, and I have been very much encouraged by the inquiries and comments it has aroused. We have ordered a thousand reprints of the symposium, and intend to distribute them to the students and faculty.

It may interest you to know we are continuing the instruction this year, and have six seniors taking their month in Medicine with outside physicians. I appreciate very much your endorsement of the plan and its presentation before the medical profession.

WILLIAM J. KERR.

Los Angeles, April 14, 1926.

TO THE EDITOR:

For many years manufacturing opticians have made a practice of returning to the referring oculist a considerable proportion of the amount charged the patient. The physician specializing in eye work has grown to expect this rebate, and even to demand it if his percentage is not forthcoming promptly. Naturally, not being a philanthropist, the optician adds to a fair price for lenses and frames the sum he is expected to pass back to the physician. It is assumed that no patient is ordered to wear spectacles in order to add to the doctor's income, and so this practice is ethical.

Representatives of two corset manufacturers of national repute have called upon me to advance their arguments as to why I should advise my expectant mothers to wear their belts and corsets, and in concluding, have stated that for every patient so referred, I will be given the customary sum of \$2. It is assumed that I am going to order corseting anyway, and so this practice is ethical.

Two clinical laboratories here in Los Angeles are frankly rebating a portion of the amounts collected. One makes a charge to the physician, but collects whatever sum the physician may elect to charge, and the difference arrives at the physician's office. The other charges the patient a fixed sum, and rebates 25 per cent dividends on the \$100 the physician has invested. This practice is in question, but so far, since the rebates are limited to actual stockholders, the practice is denied to be unethical.

A patient, needing an appendectomy or tonsillectomy, or the Lord knows what, is referred by a physician to a surgeon. The surgeon, just as the optical house, the corset manufacturer, and the laboratory, depends upon the referring physician for the bulk of his income. But he dares not show his appreciation in the same manner, for such would be fee-splitting and highly unethical. Wherein lies the difference?

I can see no essential difference between fee-splitting of operative charges and rebates from professional laboratories and business houses. I think the subject might call for profitable discussion.

I prefer not to have my name published.

\_\_\_\_\_, M. D.

We have endless statistics, these days, of defects and defectives. The layman is often confused and confounded by these exhibits, and even the physician may gasp a little at the amazing state of affairs which is sometimes supposed to be revealed. What is a defect? Does a wart deserve the distinction, and when? Is an inequality in length of feet a defect, and which foot is defective? George Washington had a deformity of the chest. Was the father of his country defective? If so, his children might well have such an inheritance.—Medical Journal and Record, March 17, 1926.

## CALIFORNIA BOARD OF MEDICAL EXAMINERS

C. B. PINKHAM, M. D., *Secretary*

The San Bernardino Sun of January 21, 1926, relates the arrest of Frank Taylor charged with forging a prescription blank of Dr. J. W. Aldridge for 20 half-grains of narcotics. The Board of Medical Examiners frequently have similar forgeries brought to their attention, such forgeries being made easy because of the narcotic registration number which most physicians and surgeons have printed on their prescription blanks. If this number were not printed thereon, it would not be possible for any impostor to know and enter the registration number of a specific physician.

Robert Belmont, giving his occupation as a chiropodist, but who does not appear on a list of those licensed in California, was recently charged with grand larceny of an automobile belonging to Mrs. Bertha Richards, according to the San Diego Evening Tribune, March 10, 1926.

J. Lafayette Berry, whose license to practice medicine and surgery in the state of California was revoked October 21, 1919, was recently charged with practicing without a license, the complaining witness alleging that she gave \$200 to Dr. Berry for the removal of an alleged cancer on the face and that "the infection was burned with acid for almost eight hours while she suffered great pain, and asserted that the 'operation' was not successful."—Pasadena Star-News, March 4, 1926.

The certificate entitling Herbert E. Bogue to practice as a physician and surgeon in the state of California was revoked March 11, 1926, after a hearing based upon narcotic charges.

Sally Broy, alleged voodoo doctor of Oakland, was recently charged with practicing medicine without a license. "Her method of treatment . . . consisted of stripping a patient to the waist, gazing through the thorax by light of a red lantern, by way of diagnosis, and then muttering weird incantations. The 'treatment' was furthered through a mystical, all-powerful salve . . ."—Oakland Times, February 25, 1926.

The appeal of Bishop W. L. Cosper, self-styled bishop of the Christian Philosophical Institute, who some time since was sentenced to ninety days in jail and a fine of \$500 for violation of the Medical Practice Act, was denied by the Appellate Court February 25, 1926.—Sacramento Union, February 26, 1926.

Dr. J. G. Ham of Los Angeles, his office assistant, Herbert Del Valle, and three others are reported to have been charged by the district attorney of Los Angeles in connection with the death of Miss Bessie McCarroll as the result of an alleged illegal operation.—Los Angeles Herald, March 12, 1926.

Rebecca Lee Dorsey, M. D., of Los Angeles was placed on five years' probation, following a hearing by the Board of Medical Examiners held March 11, 1926, in connection with her "goat-gland" announcement.

Dr. Richard Eble . . . who has just received the marked honor of being admitted to a fellowship in the American College of Chiropractors, is believed to be the only chiropractor in this vicinity who has ever been distinguished by the right to attach the four letters F. A. C. C. after his name.—Glendale News, March 11, 1926.

R. Thompson Fowler, alleged tubercular specialist, who has on prior occasions been charged with violation of the Medical Practice Act, was recently again charged with violation of the Medical Practice Act in Oakland.—San Francisco Chronicle, February 15, 1926.

At a regular meeting of the Board of Medical Examiners held in Los Angeles March 9, 1926, Dr. William S. Fowler of Bakersfield was placed on probation for five years and denied permission to handle or prescribe narcotics during that period. Dr. Fowler was charged with having prescribed and sold narcotics to known addicts in excessive amounts.—Los Angeles Examiner, March 10, 1926.

At a regular meeting of the Board of Medical Examiners held in Los Angeles March 10, 1926, Wendell O. Gregg, M. D., "was found guilty of unprofessional conduct and given five years' probation. The board also



ordered the revocation of his federal license allowing him to prescribe narcotics and liquor."

At a regular meeting of the Board of Medical Examiners held in Los Angeles March 11, 1926, Edward O. Hanlon, M. D., was placed on three years probation, with the understanding that he give up and not apply for a federal narcotic tax stamp nor alcohol permit during the term of his probation.

The Sacramento Bee of March 13, 1926, relates the conviction of Dr. Earl Harlan, well-known Colusa physician, on a charge of violation of the Harrison Act, and his sentence to three years in the federal penitentiary. Dr. Harlan's license was revoked by the Board of Medical Examiners July 8, 1925, after hearing narcotic charges filed against the doctor.

Dr. Frank C. Hart of Portland, Oregon, under a five-year sentence in McNeil penitentiary for violating the Mann Act, yesterday, through his attorneys, argued the case before the United States Circuit Court of Appeals.—San Francisco Chronicle, February 13, 1926.

H. H. Heddens, referred to in "News Items" as having been charged with violation of the Medical Practice Act at Bakersfield, California, was recently bound over to the Superior Court for trial (Bakersfield Californian, February 2, 1926). Although Heddens claims to have graduated from a medical school and to be licensed to practice in the state of New York, correspondence with the New York authorities has failed to verify his assertions; nor can it be found that he is a graduate of a medical school or licensed as a physician and surgeon anywhere in the United States.

Dr. L. T. A. Hotten, president of the Charity Anti-Cancer League, was reported recently convicted in Los Angeles on a charge of violation of the Harrison Narcotic Act. The records of the Board of Medical Examiners show that his name was formerly Hottendorf.

Heinz George A. Hummel petitioned the Board of Medical Examiners at the meeting recently held in Los Angeles to restore his license revoked February 21, 1924, and after a hearing the board decided to make no change in the record.

At a regular meeting of the Board of Medical Examiners held in Los Angeles March 9, 1926, the certificate heretofore issued entitling Charles K. Holsman, M. D., to practice as a physician and surgeon in the state of California was revoked, following hearing of a complaint based on conviction of violation of the United States postal regulations. The conviction followed an indictment by the United States Grand Jury, charging Charles K. Holsman, Henry L. Giles, Gideon M. Freeman, Ambrose E. Simms, and Otto C. Joslin (since deceased) with violation of the federal statutes. Page 200 of the 1919 directory carries the entry: "Holsman, C. K., M. D., sentenced to pay a fine of \$1500 and serve ninety days in the Los Angeles County Jail; conviction affirmed on appeal, judgment of lower court executed."

At a regular meeting of the Board of Medical Examiners held in Los Angeles March 10, 1926, Robert D. Kelso, M. D., was found guilty in connection with a narcotic charge, and imposition of sentence was suspended until the July meeting.

Dr. Franklin E. Kerr of Orange must serve the sentence imposed upon him by Federal Judge James after his conviction on a charge of sending poisoned candy through the mails to his divorced wife, Dr. Luella F. Kerr of Fillmore, according to a decision of the United States Circuit Court of Appeals in San Francisco yesterday (San Francisco Illustrated Daily News, February 25, 1926). Dr. Kerr has been cited to show cause why his license to practice in California should not be revoked—based upon the federal conviction—and final hearing has been deferred pending the possibility of an appeal to the United States Supreme Court.

Dr. Charles J. King (314 Twentieth Avenue, San Francisco), a physician, was arraigned in police court today as a slautolist.—San Francisco Bulletin, March 2, 1926.

"An additional two years' probation was imposed on Dr. O. A. Kvello of the Kvello Hospital at Hemet by the Board of Medical Examiners on March 10, 1926. He was placed on probation in 1923 for alleged violation of the narcotic law. The new probation carried additional terms of surrender of his federal license to prescribe drugs and liquor."

W. H. Lockman, a former physician, was charged with performing an illegal operation in a complaint filed by Deputy District Attorney McIsaac (Los Angeles Times, February 17, 1926). The certificate entitling William H. Lockman, M. D., to practice as a physician and surgeon in the state of California was revoked February 16, 1921.

Mrs. Christina Loose, recently acquitted of manslaughter after an operation on Mrs. Charlotte J. Sweet, pleaded guilty to violating the State Medical Act yesterday in Oakland, and was fined \$50. She was charged with two offenses, following the death of Mrs. Sweet, wife of a ballroom proprietor, last September (San Francisco —, February 21, 1926). Although newspaper reports relate that Christina S. Loose claims to be a graduate of a medical college, a thorough investigation fails to substantiate such a claim.

At a regular meeting of the Board of Medical Examiners held in Los Angeles March 9, 1926, Frederick K. Lord, M. D., charged with habitual intemperance, was found guilty, and his license to practice as a physician and surgeon in the state of California suspended for a period of one year.

Charles E. Marsh, naturopath, whose California license was revoked February 15, 1922, and restored February 12, 1925, was recently indicted by the county grand jury, according to the San Diego Union of March 11, 1926, in connection with the death of Mrs. Louise Giovanazzi, following an illegal operation.

The Los Angeles Times of March 16, 1926, relates the recent plea of guilty entered by R. J. McAdory, a physician, charged with narcotic violation, and sentence of himself and wife to ninety days in the county jail, said sentence being suspended, and both committed to the state asylum at Patton.

A press dispatch dated Jefferson City, Missouri, February 5, printed in the Saint Louis Star of the same day, relates: "Yesterday's decision by the Supreme Court, in which it refused to interfere in an injunction suit filed by Clara W. McGrew of Saint Louis against the State Board of Health, will result only in greater delays in efforts of the board to revoke medical licenses of those charged with obtaining them improperly. . . . Dr. James Stewart, secretary, in commenting on the decision, said the board had expended \$12,000 in its efforts to revoke the medical license obtained by questionable methods and to rid the state of unqualified practitioners. . . ."

Dr. F. B. Mohn of 103 South Westlake Avenue, Los Angeles, was recently ordered to appear before the prohibition chiefs to show cause why his prescription permit should not be revoked for alleged misuse of the privilege, according to the Los Angeles Herald of March 13, 1926.

At a regular meeting of the Board of Medical Examiners held in Los Angeles March 11, 1926, the certificate heretofore issued Robert W. Renwick, entitling him to practice as a physician and surgeon in the state of California was revoked, he having been found guilty of aiding and abetting an unlicensed practitioner. The Los Angeles Times of March 12, 1926, relates: "Renwick, according to evidence before the board, was employed by Roy Finney who treated foot troubles in a Hill Street office in 1923. Finney, it was asserted, had no license, but operated under cover of Renwick. One Bowman, a patient, died, and as a result Finney was convicted of practicing without a license, it was asserted by board members."

A bench warrant for the arrest of Paul Sandford, charged with practicing medicine without a license, was issued yesterday by Superior Judge L. S. Church when Sandford failed to put in an appearance at his arraignment. . . . According to W. H. Brunk, attorney for Sandford, he was not notified that the case would be called and denied that Sandford is a fugitive from justice.—Oakland Times, February 10, 1926. (News Items in the January, 1926, issue, page 97, gives the early history of this case.)

According to the San Diego Evening Tribune of March 10, 1926, Dr. John H. Seiffert was being held in the county jail at San Diego under charge of murder based on the death last week of Mrs. Louis Giovanazzi, following an alleged illegal operation.

The Los Angeles Herald of March 15, 1926, relates that "Dr. W. A. Shafer" was to be sentenced, following

a plea of guilty "to violating the Volstead Act in selling alcohol to federal prohibition agents." We find no one named W. A. Shafer licensed to practice in California, our special agent relating that Shafer has desk room in a business building in Los Angeles, and his business card shows that he is selling automobiles.

In a press dispatch dated Seattle, February 23, 1926, published in the San Francisco Chronicle of February 24, 1926, it is related that "Arvid Silverberg, Seattle physician, sentenced to one year at hard labor at Alcatraz Island, San Francisco, was refused a writ of habeas corpus in the federal court here today. Silverberg, sentenced for evading the draft in the World War, attacked the sufficiency of the case against him, maintaining that he had not been properly notified when drafted.

Following a lengthy investigation by federal agents and the sheriff's office of Riverside County, government inspectors yesterday arrested Dr. Fred Strasser at Hemet on a Harrison narcotic charge. Agents Munroy and Edmonds, posing as dope addicts who had just arrived in Southern California from an Eastern state, succeeded in making several purchases of drugs from the accused physician, they reported.—Los Angeles Examiner, February 21, 1926.

Dr. L. P. Strayhorn, physician of Montebello, was arrested yesterday by Secret Service Agent W. W. Ashe and Deputy United States Marshal Finn on a federal complaint issued at Houston, Texas. The physician was alleged to have made false statements in obtaining a loan in August, 1922, from the Federal Land Bank at Houston. Dr. Strayhorn was issued a reciprocity certificate (based on Texas credentials) October 24, 1923.

At a regular meeting of the Board of Medical Examiners held in Los Angeles March 10, 1926, a certificate heretofore issued entitling William Arthur Strole to practice as a physician and surgeon in the state of California was revoked, based upon narcotic charges.

Dr. Marion Thrasher, 84, San Francisco physician, today retained attorney Gerald Halsey to represent him in a contemplated suit for \$100,000 damages against his alleged enemies. . . . According to Dr. Thrasher, he was taken to the sanitarium by force, but released when he summoned a friend. . . .—San Francisco Call, March 22, 1926.

Three inspectors of the State Board of Pharmacy yesterday arrested Dr. O. R. Wakefield, Hollywood physician, in his office, 504 Hollywood Security Bank Building, on a charge of selling narcotics. Three purchases of narcotics were made from the doctor during as many days, according to the officers. . . .—Los Angeles Examiner, February 6, 1926.

A press dispatch dated New Orleans, March 9, printed in the Los Angeles Times of March 10, 1926, relates: "Albert B. Walker, alias M. B. Remington, who is asserted to have admitted he was on parole from San Quentin penitentiary, was arrested here by federal authorities, charged with impersonating a federal office and with passing a worthless draft on a fictitious bank at Washington, D. C. Walker registered at the De Soto Hotel, one of the smart hostleries here several days ago under the name of Remington and aroused suspicion when, it was asserted, he displayed cards which stated he represented the United States Department of Justice and the United States Public Health Service." Inquiry from the warden of San Quentin prison discloses the possibility that the individual referred to may be inmate A. B. Walker, No. 39,421, who is not a licensed physician and at no time in practice, but merely used the title of doctor on fictitious checks. From the Sacramento Criminal Identification Bureau we learn that A. B. Walker was paroled April 18, 1925, and is now wanted for violation of his parole.

Found guilty of social vagrancy, Dr. Junasai Watanabe, 47, a Japanese physician, was fined \$500 in the police court today, with a jail term of six months suspended on good behavior. Watanabe and his white companion, Eline Kramer, 27, were arrested by Detective Sergeant Cooley on information from Seattle that the Japanese had deserted his wife and nine children there, and was living with a white woman. . . . the woman being fined \$250 with the same jail sentence suspended. It was her contention that she was employed merely as

a nurse for Wanatabe, who is said to suffer from heart trouble.—San Diego Tribune, February 11, 1926.

At a regular meeting of the Board of Medical Examiners held in Los Angeles March 9, 1926, the certificate heretofore issued Ludwig Wolfesen, M. D., entitling him to practice as a physician and surgeon in the state of California, was suspended for a period of one year, following a hearing on narcotic charges.

A recent press dispatch dated Indianapolis March 10, 1926, relates: "A physician or surgeon cannot be held responsible if a sponge is left inside a patient upon whom he has operated, the Appellate Court related today in reversing the decision of the Owen Circuit Court, which awarded \$9000 damages to Mrs. Arta Bonham of Bicknell against Dr. Vance A. Funk of Vincennes." This is one for the malpractice insurance attorneys to conjure with.

Protest against a ruling of Attorney-General U. S. Webb proscribing the use of therapeutic devices by chiropractors was voiced this week in a mass meeting of 200 chiropractors of Los Angeles and Hollywood. . . . An attorney has been retained to probably handle a test case through the courts, and will co-operate with a similar association of chiropractors in the North concerned with the same issue.—Hollywood Citizen, February 25, 1926.

San Bernardino physicians and druggists today received copies of one of the most important bulletins recently issued by the federal prohibition administrator's office in Los Angeles, dealing with the question of issuance of liquor prescriptions. . . .—San Bernardino Telegram, February 17, 1926.

According to the Saint Louis Star of March 6, 1926, revocation of the charters of the Saint Louis College of Physicians and Surgeons and the Kansas City College of Medicine and Surgery, which were named repeatedly in the medical diploma-mill exposé of the Star, is recommended in a report filed today in the Supreme Court at Jefferson City by Edwin J. Bean. He acted as special commissioner of the court, and heard testimony in the attorney-general's suits to oust the colleges. Following the filing of the commissioner's report, it was announced that the two cases would be set for May 5 for arguments and final submission to the Supreme Court. . . .

Declaring hundreds of people in Los Angeles are being humbugged by fake psychics, City Prosecutor Jack Fredlander has instituted a vigorous campaign against "mediumistic fakirs."—Santa Monica Outlook, February 15, 1926). The diploma-mill exposé related how easily certificates of ordination, etc., could be obtained by those desiring to practice as "mediums," etc.

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"In my reading of the past few months I have gone through a fairly representative collection of anti-evolution books and pamphlets, and note that, like the anti-vaccinationists and anti-animal experimentalists, the writers of this eccentric literature have an unerring instinct which leads them to quote as authorities persons who are unknown to specialists in the subjects concerned or, if indubitable authorities are quoted, the extracts selected belong to a time when knowledge of the subject had not advanced to its present stage. They quote authorities to win decisions or to capture votes, not to establish truth."—From address of the retiring vice-president of Section F—Zoology—American Association for the Advancement of Science, Science, February 12, 1926.

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"You would not lead a blind man half-way across a busy street and leave him there at the mercy of the traffic." This is what we do when we erect excellent sanatoria, treat the patient successfully and then discharge him into the competitive world to find his place. He knows the cost of ill health and appreciates the value of being fit. He is anxious to earn a living, and after all the money it has cost someone to get him well he deserves every possible assistance from his fellow-citizens.—Canada Medical Association Journal.

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In the United States there is spent annually approximately \$60,000,000 to care for the 150,000 children in orphan asylums and in institutions, with an additional \$200,000,000 invested in property by public and private funds.—Dearborn Independent.



## MOBILIZATION OF MEDICAL RESERVE UNITS, NINTH CORPS AREA

Progress in the organization of the Medical Reserve Units of the Ninth Corps Area has extended to the point where a number of them have been directed to prepare their plans for mobilization in case of emergency. In a general way, units which have three-quarters or more of their commissioned personnel, including their executive staff, have been directed to prepare their mobilization plans. The following units have already been mobilized or are preparing their plans therefor. Their figures for personnel are as of April 1, 1926. In a number of instances, steps have already been taken to enroll suitable officers for the few remaining vacancies.

Unit	Home Station	Commanding Officer	Commissioned Personnel Re-quired, all Branches	Commissioned Personnel Assigned	Commissioned Vacancies	Percentage Completed
90th Evac. Hosp.	San Diego, Calif.	Col. Alfred E. Banks, San Diego.	40	33	7	82.5
88th Evac. Hosp.	San Francisco, Calif.	Col. Harry G. Ford, San Francisco.	40	33	7	82.5
81st Evac. Hosp.	Los Angeles, Calif.	Lt.-Col. Charles T. Sturgeon, Los Angeles.	40	35	5	87.5
Gen. Hosp. No. 35	Los Angeles, Calif.	Col. Henry K. Lissner, Los Angeles.	42	32	10	76.1
Sta. Hosp. No. 139	San Francisco, Calif.	Lt.-Col. Charles L. Garvin, Livingston.	13	12	1	92.3
Sta. Hosp. No. 149	San Francisco, Calif.	Lt.-Col. Justus M. Wheate, San Francisco.	13	11	2	84.6
Sta. Hosp. No. 150	Los Angeles, Calif.	Lt.-Col. Raymond L. Akin, Sawtelle, Calif.	13	11	2	84.6
Sta. Hosp. No. 142	San Francisco, Calif.	Lt.-Col. Charles E. Mordoff, San Leandro, Calif.	13	11	2	84.6
Hosp. Train No. 44	Sacramento, Calif.	Maj. Herbert A. Abbott, San Francisco.	4	4	0	100
Hosp. Train No. 55	Los Angeles, Calif.	Maj. David H. Keller, Los Angeles.	4	4	0	100
Hosp. Train No. 71	Sacramento, Calif.	Maj. Joseph G. Noble, Camp Kearney, Calif.	4	4	0	100
3rd Conval. Hosp.	San Francisco, Calif.	Col. J. Wilson Shiels, San Francisco, Calif.	21	20	1	95.2
67th Surg. Hosp.	Los Angeles, Calif.	Maj. Walter A. Bayley, Los Angeles.	20	18	2	90
Med. Lab. No. 1 (Aviation)	Sacramento, Calif.	Maj. Peter De Obarrio, Alameda, Calif.	6	5	1	83.3
Gen. Hosp. No. 61	Salt Lake City, Utah	Lt.-Col. Howard B. Kirtley, Salt Lake City, Utah.	42	38	4	90
Sta. Hosp. No. 136	Salt Lake City, Utah	Lt.-Col. Chauncey M. Benedict, Salt Lake City, Utah.	13	11	2	84.6
Hosp. Train No. 1	Salt Lake City, Utah	Maj. Carl L. Sandberg, Salt Lake City, Utah.	4	4	0	100
Gen. Hosp. No. 145	Billings, Mont.	Awaiting assignment.	42	38	4	90
Sta. Hosp. No. 138	Portland, Ore.	Maj. Calvin S. White, Portland, Ore.	13	10	3	77
Hosp. Train No. 65	Corvallis, Ore.	Maj. Claude L. Armstrong, Portland, Ore.	4	3	1	75
Sta. Hosp. No. 140	Spokane, Wash.	Lt.-Col. Ralph Hendricks, Spokane, Wash.	13	10	3	77
Sta. Hosp. No. 141	Cheyenne, Wyo.	Lt.-Col. John Hynds, Buffalo, Wyo.	13	10	3	77

The following-named Medical Corps Reserve officers are attached to the units as indicated below, and to the positions within the units, as indicated after their respective names:

**To General Hospital No. 30, Communications Zone:**

Lieutenant-Colonel Stanley F. Berry, 307 Dalziel Building, Oakland, California, as Chief of Medical Service.

Major Joseph S. Hart, 1515 Hillside Drive, Burlingame, California, as Assistant to Chief of Surgical Service.

Major Humphrey P. Palmer, 5674 Keith Avenue, Oakland, California, as Assistant to Chief of Surgical Service.

**To General Hospital No. 47, Communications Zone:**

Major William C. Cotton, Bank Building, Atwater, California, as Chief of Laboratory Service.

**To General Hospital No. 138, Zone of the Interior:**

Major William B. Deas, 794 Fifteenth Avenue, San Francisco, California, as Assistant to Chief of Surgical Service.

**To General Hospital No. 144, Zone of the Interior:**

Major Jerome T. Gardner, 5931 Keith Avenue, Oakland, California (Temporary address, care of Pacific Steamship Company, 598 California Street, San Francisco, California), as Roentgenologist.

**To General Hospital No. 145, Zone of the Interior:**

Lieutenant-Colonel George F. Pope, Winnemucca, Nevada, as Chief of Medical Service.

**To Hospital Center No. 22, Communications Zone—Headquarters.**

Lieutenant-Colonel Louis J. Gougnet, 1027 Fourth Street, Sacramento, California, as Ophthalmologist.

Lieutenant-Colonel Lorenzo F. Luckie, 800 Vassar Avenue, Fresno, California, as Otolaryngologist.

**To Hospital Center No. 24, Zone of the Interior:**

Lieutenant-Colonel Henry S. Keyes, 832 South Highland Avenue, Los Angeles, California, as Orthopedist.

Lieutenant-Colonel Robert Smart, 2531 Second Street, San Diego, California, as Medical Consultant.

Lieutenant-Colonel Carl L. Taylor, 681 Redondo Avenue, Long Beach, California, Urologist and Dermatologist.

Lieutenant-Colonel Frank B. Whitmore, 1822 North Fair Oaks, Pasadena, California, as Roentgenologist.

The following-named Reserve officers are relieved from their present assignment and are assigned or reassigned, as indicated:

Captain Wilburn Smith, Medical Reserve, 1012 Brockman Building, Los Angeles, California, is relieved from assignment as Operating Surgeon, Sixty-seventh Surgical Hospital, Third Army, and assigned within the unit as Assistant Operating Surgeon.

Lieutenant-Colonel Thomas W. Bath, Medical Reserve, Box 473, Reno, Nevada, is relieved from assignment to Station Hospital No. 139, Communications Zone, and assigned to Hospital Center No. 24, Z. I., as Surgical Consultant.

Lieutenant-Colonel Aaron J. Rosanoff, Medical Reserve, 2007 Wilshire Boulevard, Los Angeles, California, is relieved from assignment to Hospital Center No. 22, Communications Zone, and assigned to Hospital Center No. 24, Zone of the Interior, as Neuropsychiatrist.

Colonel John W. Shiels, Medical Reserve, 291 Geary Street, San Francisco, California, is relieved from assignment to Headquarters Ninth Corps Medical Service, Corps Troops, and assigned to Third Convalescent Hospital, Third Army, as Commanding Officer.

Lieutenant-Colonel Howard P. Kirtley, Medical Reserve, 1444 Yale Avenue, Salt Lake City, Utah, is relieved from assignment as Chief of Medical Service, General Hospital No. 61 (Sutherland), Zone of the Interior, and assigned to the unit as Commanding Officer.

The following-named Reserve officers are relieved from assignment, as indicated:

Major Emil O. Jellinek, Medical Reserve, 2226 Washington Street, San Francisco, California, is relieved from assignment to Station Hospital No. 142, Communications Zone.

Major Henry S. Kierstedt, Medical Reserve, 840 Powell Street, San Francisco, California, is relieved from assignment to General Hospital No. 139, Zone of the Interior.

Lieutenant-Colonel Harry M. James, Medical Reserve, 1254 West Santa Barbara Avenue, Los Angeles, California, is relieved from assignment to General Hospital No. 35, Communications Zone.

The following-named Reserve officers are assigned, as indicated:

Lieutenant-Colonel Edward C. Moore, Medical Reserve, 511 South Bonnie Brae Street, Los Angeles, California, is assigned to General Hospital No. 35, Communications Zone, as Chief of Surgical Service.

**To Station Hospital No. 140, Communications Zone:**

First Lieutenant Nicholas B. Mondloch, Station Hospital, Fort Douglas, Utah, as Supply and Mess Officer.

**To Station Hospital No. 142, Communications Zone:**

Captain Quentin J. Barker, 2135 Ocean Avenue, San Francisco, California, as Supply and Mess Officer.

Second Lieutenant Raymond T. Donohue, 360 Valley Street, San Francisco, California, as Adjutant and Detachment Commander.

**To Station Hospital No. 144, Communications Zone:**

First Lieutenant Allen J. McCarthy, United States Veterans' Hospital No. 102, Livermore, California, as Adjutant and Detachment Commander.

First Lieutenant Arthur H. Myer, 2412 Durant Avenue, Berkeley, California, as Supply and Mess Officer.

**To Station Hospital No. 150, Communications Zone:**

First Lieutenant Andrew W. Baker, 851 South Grand Avenue, Los Angeles, California, as Adjutant and Detachment Commander.

Second Lieutenant Elmer R. Jones, 2719 West Main Street, Alhambra, California, as Supply and Mess Officer.

**To Eighty-first Evacuation Hospital, Third Army:**

First Lieutenant William S. Rawlings, 967 Arapahoe Street, Los Angeles, California, as Registrar and C. O. Detachment of Patients.

**To Eighty-third Evacuation Hospital, Third Army:**

Captain Elmo D. Mathews, 2233 Eunice Street, Berkeley, California, as Adjutant and Assistant Fire Marshal.

First Lieutenant Howard E. Hodge, United States Veterans' Hospital No. 102, Livermore, California, as Mess Officer.

Second Lieutenant Vernon A. Anderson, 521 South Eleventh East Street, Salt Lake City, Utah, as Registrar and C. O. Detachment of Patients.

Second Lieutenant Merrill C. Shaver, 3051 Sixtieth Avenue, Oakland, California, as Detachment Commander.

**To Eighty-fifth Evacuation Hospital, Third Army:**

Second Lieutenant Joseph F. Garnett, Station Hospital, Fort Douglas, Utah, as Registrar and C. O. Detachment of Patients.

Second Lieutenant Arthur R. Salguero, Jr., Station Hospital, Fort Douglas, Utah, as Mess Officer.

**To Eighty-eighth Evacuation Hospital, Sixth Army:**

Second Lieutenant George H. Frazier, 5322 Geary Street, San Francisco, California, as Mess Officer.

**To Eighty-ninth Evacuation Hospital, Sixth Army:**

First Lieutenant Ellis L. Spurgeon, 156 South Johnston Street, Los Angeles, California, as Registrar and C. O. Detachment of Patients.

Second Lieutenant Lloyd L. Curtice, 1800 Hillhurst Avenue, Hollywood, California, as Adjutant and Assistant Fire Marshal.

Second Lieutenant Tom M. Hall, 757 West Holt Avenue, Pomona, California, as Mess Officer.

Second Lieutenant Frank E. Kelly, 600 McComas Building, Los Angeles, California, as Detachment Commander.

**To General Hospital No. 30, Communications Zone:**

Second Lieutenant William P. Carlile, 5 Twenty-seventh Street, San Francisco, California, as Detachment Commander and Registrar.

Second Lieutenant Wyeth W. Clopton, 1270 Pine Street, San Francisco, California, as C. O. Detachment of Patients.

**To General Hospital No. 35, Communications Zone:**

Captain Julius C. Mendonse, 4279 South Harvard Boulevard, Los Angeles, California, as C. O. Detachment of Patients.

**To General Hospital No. 138, Zone of Interior:**

Second Lieutenant Ernest M. Innes, Sierra Buttes Inn, Sierra City, California, as Assistant Quartermaster.

Second Lieutenant David H. Pencovic, 807 Seventh Street, Oakland, California, as C. O. Detachment of Patients.

Second Lieutenant Ralph L. Stewart, 370 Frederic Street, San Francisco, California, as Detachment Commander and Registrar.

**To General Hospital No. 140, Zone of Interior:**

First Lieutenant Vern Wheeler, 5551 Melrose Avenue, Los Angeles, California, as Adjutant.

Second Lieutenant Opie E. Cody, 120 East Cypress Avenue, Glendale, California, as Detachment Commander and Registrar.

Second Lieutenant Meredith T. Waterman, 401 Concord Street, Monrovia, California, as Assistant Quartermaster.

**To General Hospital No. 142, Zone of Interior:**

Second Lieutenant Charles A. Huffman, 438 North San Gabriel Avenue, Azusa, California, as Detachment Commander and Registrar.

Second Lieutenant Charles G. Kirksey, 2120 East Hill Drive, Eagle Rock, California, as Mess Officer.

Second Lieutenant Percy L. Walling, 853 West Ninth Street, San Pedro, California, as Assistant Quartermaster.

**To General Hospital No. 143, Zone of Interior:**

Second Lieutenant Earl B. Gratto, Caliente Pharmacy, Caliente, Nevada, as Detachment Commander and Registrar.

**To Third Convalescent Hospital, Third Army:**

Captain Gabriel Cushman, 118 First Street, San Francisco, California, as Registrar.

First Lieutenant Harry N. Christensen, 331 Mills Building, San Francisco, California, as Adjutant, Detachment Commander, and Fire Marshal.

Second Lieutenant William F. Boehme, 1307 Market Street, San Francisco, California, as Supply Officer.

**To Sixty-fifth Surgical Hospital, Third Army:**

Second Lieutenant Melvin L. Valentine, 923 Eddy Street, San Francisco, California, as Mess Officer.

**To Seventy-first Surgical Hospital, Sixth Army:**

Captain Dudley R. Clarke, 2616 Woolsey Street, Berkeley, California, as Adjutant, Detachment Commander, and Evacuation Officer.

Second Lieutenant David Kanter, 830 Market Street, San Francisco, California, as Registrar and C. O. Detachment of Patients.

**To Seventy-second Surgical Hospital, Sixth Army:**

Captain Harold O. Sexsmith, 4564 Finley Avenue, Los Angeles, California, as Adjutant, Detachment Commander, and Evacuation Officer.

First Lieutenant William J. Davis, Station Hospital, Fort Rosecrans, California, as Registrar and C. O. Detachment of Patients.

**To Hospital Center No. 22, Communications Zone—Headquarters:**

Captain Thorfin L. Linn, U. S. V. B. Hospital No. 102, Livermore, California, as Personnel Officer and Detachment Commander.

**To Hospital Center No. 24, Zone of Interior—Headquarters:**

First Lieutenant Herbert H. Bartlett, 2461 East Eighth Street, Los Angeles, California, as Personnel Officer and Detachment Commander.

The following-named Reserve officers are relieved from their present assignment, and are assigned as indicated:

Major Boyd M. Krout, Medical Reserve, San Joaquin General Hospital, Stockton, California, from assignment to Headquarters 349th Medical Regiment, Ninth Corps, as Neuropsychiatrist, and assigned to General Hospital No. 138, Communications Zone, as Assistant to Chief of Medical Service.

Captain Emil W. Myer, Medical Reserve, Southern California State Hospital, Patton, California, from assignment to 427th Hospital Company (Motor) 349th Medical Regiment, Ninth Corps, and assigned to General Hospital No. 142, Zone of the Interior, Medical Ward Officer.

Captain Floyd H. Racer, Medical Reserve, Lomita, California, from assignment to 427th Hospital Company (Motor), 349th Medical Regiment, Ninth Corps, and assigned to General Hospital No. 142, Zone of the Interior, as Medical Ward Officer.

Captain Orton C. Jones, Medical Reserve, Lompoc, California, from assignment to 427th Hospital Company, 349th Medical Regiment, Ninth Corps Troops, and assigned to General Hospital No. 144, Zone of the Interior, as Medical Ward Officer.

Captain Edward N. McKee, Medical Reserve, 5138 Highland Avenue, Eagle Rock, California, from assignment to 427th Ambulance Company, 349th Medical Regiment, Ninth Corps Troops, and assigned to Evacuation Hospital No. 69, Sixth Army, as Roentgenologist.

Major Edwin E. Hobby, Medical Reserve, 693 Sutter Street, San Francisco, California, from assignment to 349th Medical Regiment (Headquarters), Ninth Corps Troops, and assigned to Surgical Hospital No. 71, Sixth Army, as Operating Surgeon.

Major Carl L. Smith, Medical Reserve, P. O. Box 131, Adin, California, from assignment to Battalion Commanding Officer Hospital Battalion, 349th Medical Regiment, Ninth Corps Troops, and assigned to Medical Laboratory No. 2 (Aviation) Communications Zone, as Commanding Officer (Flight Surgeon).

Captain Orris R. Nyers, Medical Reserve, 431 F Street, Eureka, California, from assignment to Regimental Headquarters, 349th Medical Regiment, Ninth Corps Troops, and assigned to Medical Laboratory No. 2 (Aviation), Communications Zone, as Psychologist.

Captain Julian C. Kennedy, Medical Reserve, 370 Lincoln Avenue, Calistoga, California, from assignment to Medical Laboratory Section of the Service Company, 349th Medical Regiment, Ninth Corps, Troops, and assigned to Nineteenth Corps Medical Headquarters, Nineteenth Corps Troops, as Epidemiologist and Statistician.

The following-named Reserve officers are relieved from assignment, as indicated:

Captain Hiram B. Duncan, Medical Reserve, 969-975 Flood Building, San Francisco, California, from Medical Laboratory No. 2 (Aviation), as Laboratory Clinician.

The following-named Medical Corps Reserve officers are assigned to the 104th Division, and attached to the 414th Infantry, 104th Division:

Captain Rush Brown Stevens, 1236 Yale Avenue, Salt Lake City, Utah.

First Lieutenant Silas Schwartz Smith, 261 Third Avenue, Salt Lake City, Utah.

The following-named Reserve officers are assigned, relieved and assigned to organizations, as indicated:

Captain Roscoe S. Van Pelt, Medical Reserve, 309 Haas Building, Los Angeles, California, is assigned to Headquarters, 386th Engineer General Service Regiment, C. Z.

The following-named Reserve officers are assigned, as indicated:

First Lieutenant Leonard Everett Croft, Medical Re-



serve, Soldiers' Home, Sawtelle, Los Angeles, California, to General Hospital No. 142, Zone of the Interior, as Medical Ward Officer.

Captain Franklin Hyatt Raley, Medical Reserve, 420 East Third Street, Salt Lake City, Utah, to Station Hospital No. 136, Communications Zone, as Surgical Ward Officer.

Lieutenant-Colonel Harry Murray James, Medical Reserve, 1254 Santa Barbara, Los Angeles, California, is attached to Hospital Center No. 24, Zone of the Interior, as Chief of Medical Service (Convalescent Camp).

Major Henry Stevens Kiersted, Medical Reserve, 840 Powell Street, San Francisco, California, to General Hospital No. 30, Communications Zone, as Executive Officer.

Major Emil Otto Jellinek, Medical Reserve, 2226 Washington Street, San Francisco, California, to General Hospital No. 138, Communications Zone, as Assistant to Chief of Medical Service.

First Lieutenant Frank John Ratty, Medical Reserve, 4820 Cape May Avenue, Ocean Beach, California, to Evacuation Hospital No. 90, Sixth Army, as Medical Ward Officer.

First Lieutenant William F. Stein, Medical Reserve, 1020 Mattel Building, Fresno, California, from assignment to the Second Veterinary Evacuation Hospital, Third Army, and assigned to Headquarters 363rd Infantry, 91th Division, as Medical Officer.

Captain Alfred Cyril Callister, Medical Reserve, 442 A Street, Salt Lake City, Utah, to General Hospital No. 61 (Sutherland), Zone of the Interior, as Surgical Ward Officer.

First Lieutenant Harry Mitchell Kanner, Medical Reserve, Box 34, Colfax, California, to the 312th Observation Group, Sixth Army.

First Lieutenant Mark Lewis Gerstle, Jr., Medical Reserve, 310 Sansome Street, San Francisco, California, 340 Observation Group, Nineteenth Corps.

The following named Infantry Reserve officer is assigned to the Ninety-first Division:

Major Robert T. Jellison, Medical Reserve, 1451 Yale Avenue, Salt Lake City, Utah, is assigned to General Hospital No. 61, Zone of the Interior, as Executive Officer.

#### FUTURE MEDICAL MEETINGS

All Western medical and health agency organizations are invited to keep California and Western Medicine supplied with the dates, name and address of executive officer of coming meetings for insertion in this directory.

**American Medical Association**, Olin West, Chicago, Secretary and General Manager, Washington, D. C.

**California Medical Association**, Emma W. Pope, Balboa Building, Secretary, Los Angeles.

**Nevada Medical Association**, Horace J. Brown, Reno, Secretary, September 24-25, Reno, Nevada.

**Utah Medical Association**, Frank R. Steele, Salt Lake City, Secretary, May 6-8, Salt Lake City.

**Pacific Coast Surgical Association**, Edgar L. Gilcreest, San Francisco, Secretary, February, 1927, Del Monte.

**Pacific Northwest Medical Association**, Frederick Eppelen, Spokane, Secretary, July 1-3, Spokane.

**Pacific Coast Oto-Ophthalmological Society**, Kaspar Pischel, San Francisco, President, ———.

**Northern California Medical Association**, John D. Lawson, Woodland, Secretary, ———.

**California Association of Physiotherapists**, Miss Mabel Penfield, 560 Sutter Street, San Francisco, Secretary, ———.

**Southern California Medical Association**, C. T. Sturgeon, 1136 West Sixth Street, Los Angeles, Secretary, ———.

**California Association of Medical Social Workers**, Mrs. Sophie Mersing, Mount Zion Hospital, San Francisco, Secretary, ———.

**Medical Women's National Association**, Lena K. Sadler, 533 Diversey Parkway, Chicago, Secretary, ———.

**California State Nurses' Association**, Mrs. J. H. Taylor, 74 New Montgomery Street, San Francisco, Secretary, June 28 to July 2, Long Beach, California.

I believe that in science has come the chief revelation of the will and purposes of God that has been made to our generation. I believe that it is more important for the Christian preacher to understand this new revelation, and to apply it to his ethical teaching, than to cultivate a sympathy with social revolution and the "demands" of manual labor. Perhaps the great struggle of the future will be between science and sentimentalism, and it is by no means certain that the right side will win. . . .  
Dean W. R. Inge.

A popular vote was taken in France recently to determine who, in all French history, is the most popular hero of all time. Many thought that Napoleon Bonaparte would win. But he did not. Louis Pasteur won. Napoleon was next, but thousands of votes behind.

In large cities there is a group of physicians and surgeons of outstanding ability who gain their eminent position by hard and conscientious work. Then there is the group of younger men of the same type striving for a place in the sun by the same route. These two groups are a credit to the medical profession. But there is another group which varies in number according to the size of the city, the larger city having the greater number. This group is made up of poorly trained, lazy, ignorant and careless medical men, fakers, quacks, and charlatans. A city the size of New York is filled with such men practicing the healing arts, reaping a good financial harvest. Why can men of the last class thrive in a large city and why do they usually starve in rural districts? Simply because in a large city there is no one to check up on their mistakes; they and their work are lost in the crowd; the pitiless light of publicity does not shine upon their ignorance and their mistakes are buried. In large cities a gift of gab, polished manner, fine offices, the right location and a small amount of ability will carry a physician a long way toward financial success as a practitioner. In the city a quack can always call in a consultant from the first two groups or he can send the patient to a hospital and thereby clear his own skirts and cover up his ignorance. But the practice of the healing arts in a rural district or small town is quite different. A doctor may look the part and may have good offices, on the right street, but if his results are poor he is through. A rural practitioner must be physically strong and willing to travel long distances day or night, winter or summer, over rough roads. He must be self-reliant, for there is no chance to call in a consultant, no hospital to rush to for aid, nothing but his own skill, ingenuity and nerve to take him through the worst emergencies with the eyes of relatives and often of the whole town upon every move. . . . Probably the most potent factor in undermining the rural doctor's reputation are the petty jealousies, sly remarks and innuendoes of the rival physicians themselves. . . . Rural districts are losing their doctors, not because there is a general scarcity of physicians, but for the following reasons: 1. They demand a higher type of physician than the average city practitioner and expect to pay less for the service. 2. A country doctor has a hard and strenuous life compared to the easy office life in the city. 3. Country life offers very few of the refinements that are enjoyed in the city. 4. Rural districts want a local physician for only the emergency calls, and these are too few in number to support an average physician. The ubiquitous Ford makes it possible to run the chronic and subacute cases to the neighboring city. No matter how much ability the local physician may have, still a certain percentage of the people will think that the distant doctor is the best, just like the cows think the grass in the adjoining pasture is the greenest.—Charles L. Larkin, Medical Journal and Record, March 17, 1926.

Why is it that those who practice medicine are the natural enemies of quackery and charlatanism, through which, under the guise of miraculous cures, avaricious imposters trade upon the credulity of the ignorant?

Let us employ Webster's Dictionary. "Medicine" is defined "as the science which relates to the prevention, cure or alleviation of disease." "Science" is "ascertained truth" or accumulated and established knowledge." "Practice" is the "application of science to the wants of men." Applying these definitions, the practice of medicine may be defined as the application of ascertained truth and established knowledge to the prevention, cure or alleviation of human diseases.—Lloyd Paul Stryker, Counsel New York Medical Society, New York State Journal of Medicine.

Have you noticed that American men, women, and children are three times as beautiful as they were in 1915? Oh, you must have done so; statistics show it, and so does Charles Nessler, president of the Master Hairdressers' Association of America. Mr. Nessler's figures show that there are 30,000 beauty parlors in this country, three times as many as there were in 1915; that they took in \$390,000,000 of the people's money that year and that they were patronized by 60,000,000 men, women, and children.—New York Sun.

# CALIFORNIA AND WESTERN MEDICINE

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Volume XXIV

JUNE • 1926

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# Diarrheas of Infants

The usual season for Summer Diarrheas of infants is just around the corner! For several summers past physicians have found

## MEAD'S CASEC

or

## MEAD'S POWDERED PROTEIN MILK

useful in the treatment of the common fermentative diarrheas. A formula is suggested for the physician's consideration and approval:

Whole Milk.....10 ounces  
Cold Water.....20 ounces  
Casec (2 envelopes)..... $\frac{2}{3}$  ounce

Mix the CASEC with enough of the cold water in a cup to make a thin paste. Add the paste to the balance of the water, pour in the milk, and heat the mixture over a slow flame to the boiling point, stirring constantly to avoid lumps. Allow the mixture to boil actively for 1 minute, remove from stove, cool, and divide into bottles sufficient for the 24-hour feeding.

### Suggested Amounts to Be Given at Each Feeding Are as Follows:

Age Months	Ounces Each Feeding	Number of Feedings in 24 Hours
1.....	2 to 3.....	7
2.....	3 to 4.....	7
3.....	4 to 5.....	7
4.....	5 to 6.....	6
5.....	5 to 7.....	5
6 to 9.....	6 to 8.....	5
9 to 12.....	7 to 9.....	5

Infants under Four Pounds may require 8 feedings, 2 ounces each, in the 24 hours

In two or three days add 1 level tablespoonful of *Dextri-Maltose* No. 1, and increase one tablespoonful every other day until the baby is taking 5 or 6 level tablespoonfuls of *Dextri-Maltose* in the 24-hour Casec feeding.

The Casec feeding may be continued for 3 or 4 weeks, then a gradual return to the regular milk mixtures of either fresh milk or *Mead's Powdered Whole Milk*, with *Dextri-Maltose* additions, may be instituted.

Our Literature No. 109 entitled "Certain Types of Sick Infants" fully explains the use of CASEC in diarrheas.

Samples of Casec and copies of Literature No. 109 will be furnished immediately on request.

MEAD JOHNSON & COMPANY, Evansville, Indiana, U. S. A.

Manufacturers of Infant Diet Materials Exclusively

# CALIFORNIA AND WESTERN MEDICINE

VOLUME XXIV

JUNE, 1926

No. 6

## SOME METHODLESS MUSING FROM ROME

By LANGLEY PORTER, M. D., *San Francisco*

THE EDITOR—Langley Porter, who has been in Europe for more than a year, forwards this useful narrative from Rome. Doctor Porter is far enough away from the trees to see the forest of American medicine, and he finds it comforting scenery. At the same time he tells us many interesting things about the work of our colleagues and health institutions abroad, and he makes his narrative entertaining as well as informative.

IT WOULD seem that if there is any effective Internationale, it is to be found in the fraternity of the medical profession. Of course, the Internationale of the Church of Christ is organized and co-ordinated to the highest degree that laicest zeal and human intelligence permits, but the brotherhood of medicine with its zeal for the achievement of any knowledge that will advance the art of healing is a building force that brings men of alien speech and diverse race into a constructive unity that is a close second to the Church, certainly far more useful and effective than the Reds, so that anywhere in the world the mere fact of membership in our profession opens the gates of friendship and the gates of opportunity that are in the keeping of the local men of medicine. Nowhere is this more true than in Italy, and to the visiting American, especially, is welcome offered. It is gratifying to him to find how many of his Italian colleagues speak English. The younger men, especially those interested in surgery, say that now one must know English, for, if they were unable to follow the American and English journals, they would be lost. Those of the Italians interested especially in internal medicine, in pediatrics and in biochemical research are laudatory of the work done in the United States and follow its every development with the keenest interest.

It makes one proud to be an American and to find the way in which the European values the work of our countrymen, and it makes one a little ashamed to think how little we reward our great men and how much of their work, in our rush and drive, we take for granted and forget to appreciate.

As for the kind of work the Italian physicians do, you, in California, have heard of Putti of Bologna just of late. Everyone has heard of the work of Bastianelli and Alessandri in surgery, of Marchifava and Grassi in malaria prevention, and of the tremendous foundation work enshrined in Lucianis volumes in physiology, and in the history of medicine there are names famous in the annals of medicine which Italians honor quite as much as they do the heroes whose laurels were won in war or in government.

Many an Italian street is called Via Morgani, or Via Volta. Art, too, has enshrined the masters of medicine in statue and fresco. The Italians are proud of their universities; for more than a thousand years Bologna, Padua, Pisa and Perugia, among others, have kept alive the traditions of learning, especially the Hippocratic tradition, throughout the dark ages and have been foremost in every educational revival up to the twentieth century. Particularly are they proud that legal medicine has been taught continuously since the early years of the twelfth century.

Speaking of legal medicine, the Institute of Legal Medicine at Rome, a part of the University Medical School, is a remarkable institution. It is a monument to the vigor and personality of one man, the Director, whose long life—he is now well past his seventieth year—has been devoted to the development, organization and administration of this work.

The corpse of every human dead by violence, whether accident or criminal violence, murder or suicide, is brought under the searching investigation of the institute. Every medical student has the opportunity of observation of each deceased and of instruction in means for working out causes of death, and in the legal implications and responsibilities in each case. There is no coroner among the Roman city officials. The institute makes all investigations and examinations of the actual body, and hands its records to the examining magistrate who decides whether or not accidents are due to culpable or avoidable negligence, and whether the person found dead was a suicide, the victim of murder, of accident, or of death from natural causes. The body is untouched by anyone, even police, until it is inspected by one of the physicians of the institute. This physician makes a complete visual examination, recording his findings without disturbing the corpse. He then photographs it and then transports it to the institute in a special, closed vehicle. The corpse is then thoroughly examined by two physicians, and all findings added to the first record. After this it is placed on a wheeled stretcher and put into a compartment where it is frozen. No one other than the institute staff is permitted to view the dead, whose face has been photographed in



several positions. These photographs are exposed to view in an outer room. Only one who satisfies the authorities that he has a missing relative or friend may view these photographs. If he thinks he identifies them, the frozen body on its wheeled stretcher is transferred into a glass refrigerating chamber, in a special viewing room, and is viewed by the claimant in the presence of the magistrate who takes all the details of the claimant's story down in legal form. When the viewing is terminated, the body is returned to the closed section of the freezing chamber. In this way all the morbid horrors and disgraceful pandering to morbidity prevalent in the morgue system are avoided.

For the students, the same wheeled stretcher can be placed on an elevator, transported to the lecturer in the classroom and returned to the freezing chamber without being touched and with all the respect due to a dead human being.

The pathological collections used for teaching are probably unequalled in number and interest. The results on bone from every possible kind of injury, gunshot and otherwise, are there, together with a full history of the circumstances of the injury and the appearance presented by the fresh tissues as a result of the damaging forces. Numerous are preservations of the soft tissues of the drowned, from which the students are taught to recognize the changes that various periods of immersion cause in the body structures, especially the fat. Then, too, there are laboratories in which are practiced and taught the biological reactions that identify human blood, sperm, milk and other fluids, from those of animals. This institute is altogether a remarkable tribute to Roman medicine, but especially to its director.

The institute works in close contact with the other branches of the Polyclinic and the City Hospital. These two institutions are models of organization and administration. They are housed in some twenty or more pavilions and their combined bed space runs to upward of 2500 beds. Of these, the Polyclinic, which is under the administration of the authorities of the medical school of the University of Rome, disposes of roughly 1200 beds. These beds are occupied by patients suffering from disease in the acute and subacute stages. When the disease becomes chronic, or when its manifestations cease to be of value for the instruction of the student, the patient is shipped to the nearby pavilion of the City Hospital, which undergraduate students do not visit. The result of this plan is a diagnostic clinic of the first importance, convenient for patient, physician, and student. The surgical, x-ray and laboratory appointments are most modern and they are used to the utmost. In the large central pavilion given over to administration is a very complete library; naturally, for the most part, the volumes are Italian, although nearly as many are French. German books are there in abundance, while English standard works are not wanting. Especially are English and American periodicals well represented. The fundamental education of the Italian student supplies a real knowledge of French and German, often with a reading knowledge of English. There,

French and German are the real things, not the irritating and imperfectly understood attempts at languages our medical students usually bring to the library from the academic classrooms.

The pediatric department of the Polyclinic consists of a group of pavilions, in size about the same as the San Francisco Children's Hospital. It is new, part of it still in an unfinished state. At present, only three wards and the laboratories are in a going condition. It is here that Caronia is working with the method that he has devised for growing anerobic cultures of filter-passing organisms. He and his pupils are busy trying to relate such organisms to the various acute communicable diseases so common in childhood. The first of the filter-passing anerobes credited with pathogenicity was the organism first described by Di Cristina of Palermo, an organism which he and his pupils believe to be the cause of scarlatina. They hold that the role of the streptococcus is as a complicator. Caronia, formerly Di Cristina's pupil and now the foremost experimenter in this field, reports the growth of anerobic media of the virus of measles, of vaccinia, of German measles, of herpes zoster and chickenpox. Much interest is being evinced in the work, and many in Germany, France and Poland are duplicating the researches. One of the most interesting practical results of the work is the apparent possibility of immunizing against measles by preventive inoculation with killed incubated cultures started from bone marrow or nasal washings of measles' patients. There are several thousand observations made by various observers and there seems to be little reason to doubt that immunity is conferred. Recently, certain Polish observers, redoing the work, claim to have found that the unseeded medium used, which is prepared according to the methods of Tarroggi and Noguchi, is equally potent in protecting children against measles infection. Caronia himself had tested this point and in his experiences he found that while cultures protected, the mediums did not.

The whole nature of the microscopic organism is such that its very presence must be inferred from changes produced in the culture medium during its life cycle, for its minuteness renders its individual identification impossible. With such a nature, it must be that much conjecture and interpretation are imported into the problem while controversy and argument lead to complicate a field already complex enough. If, however, the Polish investigators are right, and a culture medium which contains ascitic fluid and autolyzed healthy rabbit tissues can protect a human child against the agent of an infective disease like measles, then there is opening a new chapter in immunology and one that is of utmost importance to preventive medicine. One striking evidence there is in favor of Caronia's work: On his service, patients with measles, scarlet fever and diphtheria occupy the same ward, protected from the diseases which they have not contracted by inoculations; and cross infections do not occur.

The Polyclinic department of Pediatrics has a much smaller hospital than the "Ospedale del Bambino Gesù." This is a fine workmanlike hospital,

where the ward work is well organized, the children well cared for and happy looking. One striking difference in the modes of treatment stands out; even in the infants' wards, the Italian's overweening passion for hypodermic medication is manifest. Every clinic table and doctor's desk is piled high with boxes of ampouls, and every drug store window is decked with an array of cute little miniature bottles of every conceivable color; truly esthetic displays they are in every color of the rainbow, for every ill that flesh is heir to, to be self-administered. They have even gone so far as to provide a self-loading spring-acting hypodermic shot by a trigger that can be used with one hand; and that's no joke, it's the solemn truth. A hundred iron preparations, in as many colors, dozens of iodides, arsenics of every sort, and, most popular, the not specific protein preparations which are advertised for every ill from tuberculosis to that tired feeling. The explanation given with the wrapper is that the protein injection stimulates and elevates all the body's powers of resistance and particularly increases the tone of all the nervous system, especially those parts in which Vorchoff has been so successful in interesting the aged and overworked. There is, however, one line of hypodermic medication that seems to produce results little short of miraculous, that is, the vaccine treatment of typhoid.

Typhoid fever patients crowd the wards, especially of the children's hospital of southern Italy, and private practitioners say that innumerable unrecorded cases are treated at home. Two types of vaccine are used, a simple autogenous and an autolyzed. The latter is preferred by men with most experience. Autolysis is produced by the addition of one or two cubic centimeters of convalescent typhoid serum to thirty of a broth culture of the *B. Eberth* that has had twenty-four hours' incubation. This is then incubated for twenty-four hours more. Convalescent serum in like amount is added and a third incubation is undertaken. By this time all bacteria should be autolyzed, but for the sake of safety the culture is treated with tricresol or formol. In many patients one injection brings on a critical drop in temperature. Most need not more than two injections to produce the result and it is rare that more than three injections have to be given. An examination of literally hundreds of records from the files of several different hospitals in Rome and in Naples shows that the vaccine has a specific action. Many of the patients were deeply toxic, some seemed almost moribund on admission, but in every instance the reaction was similar and recovery ensued. Of course, the very toxic patients were longer convalescing and they were more subject to complications.

Syphilis and tuberculosis are very common and Potts disease, especially, is frequent. Helio-therapy is now in general use in the children's and orthopedic hospitals of Italy. The treatment of syphilis is much the same as in America. Bismuth has had a vogue, but is falling into disuse. Neosalvarsan is the standby. Some of the clinicians are enthusiastic about an arsenic preparation—*Treparsolo*—which is especially given by mouth. Flammini, who has charge of the foundling asylum where some 28 to 30

per cent of the babies born are syphilitic, finds that the drug is taken well, rarely causes diarrhea, and causes the Wassermann reaction to disappear as rapidly as it does in controls injected with neosalvarsan. Should future experience continue favorable, physicians will have found a useful adjunct in the treatment of *treponema pallida* injections.

Among Italian physicians, great interest is being aroused in the anatoxin of Ramon. These are the filtered toxins of diphtheria and of tetanus treated with formic aldehyde. The treatment seems to render the toxin innocuous, injected, however, in three doses spaced at three- to five-day intervals, each dose larger than the last. The anatoxin, as the treated toxin is called, invades the body and affects the cells in such a way that subsequent lethal doses of the toxin have no noxious effect. Here again there is opening a wide and important area in immunology. When the biochemist can tell us why formol added to toxins renders them innocuous, yet does not impair their power to stimulate animal tissues to produce immunity against untreated toxins, perhaps we will get an inkling into the real nature of infections, toxæmias, and the reactions which protect the animal cell against them.

While the practice of medicine is orthodox and like enough to the routine of its practice among ourselves, the difficulties encountered by the public health authorities are evident. The health officers are scientific, well-trained men. Especially in the Institute of Hygiene, where are the two Alessandrini, a model institution where bacteriology and parasitology are investigated and taught in a masterly way. But what can even genius do in the face of the poverty, the bad housing, the lack of fundamental instruction which leave the great mass of the population with no mental receptivity for the lessons the hygienist strives to teach. The war did a lot to inform the younger generation about the dangers of uncleanness, but to see the way in which food is handled in Rome and Naples is to understand the high morbidity from diarrheal diseases that afflicts Italy. Windy cities these are; with every gust, dust is lifted to whirl into the open doorways in which hang hams, cheeses, strings of sausages, fish, fowl, meat, and on the open shelves of stalls loaded with fruits and vegetables. The methods of handling milk, too, are primitive. In Naples, cows and goats are driven about the streets and milked at the consumers' door into a can or bottle that has been let down by a cord from an upper window. The milk is consumed before its bacterial content has time to develop, but in Rome such methods are forbidden with the result that daily milk is brought from distant farms, handled by ignorant, slovenly boys in dark cellars in a way almost incredibly unsanitary. Altogether the lack of care in the hygienic handling of foodstuffs accounts in a large measure for the 300,000 children under four years of age who succumb to those diseases usually classed as diarrheal.

In Naples, where they think that 100 or more cases of typhoid monthly is a light visitation in a population of 100,000, surface drainage of flood waters is the rule. Dogs and children deposit their intestinal secretions everywhere about on the streets.



The venders of vegetables who have their green goods spread out on the same streets can be seen every few minutes dipping brushes into the waters that flow through the gutters and sprinkling the greens to keep them from wilting. It would take one sanitary inspector to every twenty of the population to reform the unsanitary habits of the Neapolitans.

That there is so little emergency hospital surgery from automobile accidents is a marvel to a stranger viewing the intricate tangle of traffic in a south Italian city for the first time. Narrow streets, street car lines, foot passengers who crowd not only the inadequate sidewalks but fill also the roadways, streets that are hardly more than tortuous winding lanes, automobiles by the hundreds. No rules of the road, every man driving where and how he can, and yet all going smoothly, quietly and fairly rapidly. It is a tribute to the Italian character and the national catchword, "Pazienza," patience. Autos dart onto the street car lines, it seems that collision is inevitable, the chauffeur raises his hand, the motorman slows or stops as the case may be. An automobile is forced into the path of another approaching and quite as a matter of course the approaching driver swerves to accommodate the encroacher without noise or comment. Slow-moving vetturas, horsedrawn carriages, are avoided and as for pedestrians who swarm in the roadways, they pay no attention whatever to the traffic. It is accepted that the drivers of motor cars will avoid them and they go serenely and confidently on their way. With all this lack of organization in the traffic, Naples in a year has fewer persons injured by traffic accidents than San Francisco in a fortnight. The responsibility is all on those who use vehicles—automobiles, street cars and carriages—and they live up to it. It is interesting that on January 1, Rome instituted squads of traffic police and replaced, by a system of traffic control based on American practice, the haphazard older lack of direction. Immediately the drivers shifted the burden of responsibility onto the traffic squad and lost their interest in protecting the pedestrian, and the other drivers forgot their courtesy, with the result that in three months under the new system there has been more for the emergency hospital staff from automobile accidents than in the twelve months preceding.

There is so much of interest in the various aspects and implications of medical practice in modern Rome that a mere reference to all of them would fill many pages, yet these things, fascinating as they are, by no means exhaust the doctor's interest in Rome. On every hand are to be found evidences of the intimate part our profession played in the 2500 years' history of this fascinating city. Even twenty centuries ago, when Rome was little more than a collection of wigwams planted on the top of the Palatine Hill, a hill surrounded on every side by marshes, it had a temple raised to the goddess Fever, in their tongue, "Februa." If one can judge cause by effect, the goddess was propitiated, for after many years fever disappeared from that Roma Quadrige built on the Palatine Hill. It is true that

because of the need for wheat lands and cattle pastures, the surrounding marshes had been drained with great labor. We moderns may infer that with the puddles in the marshes went the mosquito and with the anopheles, the plasmodium, but to the Roman, unlearned in epidemiology, a placatable goddess was a great comfort and, as a result, Februa had her shrine and her priests and her votaries up almost to the time of the great Julius Caesar, who died but a few years before the coming of the Christian era. When these very marshes were covered with temples, law courts and triumphal arches and columns from which Rome ruled the known world and from which emanated most of the fundamental laws and political ideas which keep the world today in the paths of civilization, at the foot of the Palatine was another temple of interest to men of our craft, the temple of Jotuma, goddess of the sacred spring of healing waters, that was served for more than a thousand years by an unbroken line of maiden priestesses, as was the neighboring shrine of Vesta which protected the sacred fire. A wise old priest king of the very ancient days of Rome's history, one Numa, laid down the laws and cults that surrounded these temples. It seems that he was one of those supermen like Moses who saw the force of hygiene and the need for an uncontaminated water supply, and, also, in the days when fire making was a little understood art with an extremely difficult technique, the need for an unfailing source of coals for kindling the hearts of his people. Also, dealing with a superstitious, savage, untutored, careless race, he concluded that only by surrounding the city's water and fire supplies with the protection of religious observance could he secure them to his followers. Therefore, he obtained a convenient revelation and the cults of the two goddesses were established, not only established, but maintained until the time of Constantine, more than 1000 years later. The ruins of the Fountain temple of Jotuma are still to be seen in the Forum, and just behind it, part of it, in fact, is a temple of Esculapius, one of the first established in Rome.

But I have already overrun your patience, I am sure. The hundred and one Roman remnants that testify to the extent and diffusion of the cult of Esculapius are so interesting and so bound up with the history of medicine as it was practiced in the city of the Caesars and lead so directly up to its full flowering in the Hippocratic revival at the time Galen and his disciples appeared that to embark on such a discussion would be to overstrain the courtesy of your hospitality.

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If you were a soldier in the ranks and failed to keep step with your comrade, you would be reprimanded severely by your commanding officer.

If you failed to keep step with your partner on the ballroom floor, you would soon be shunned or ignored by good dancers.

A church choir would be a nuisance with three or four voices out of time.

Are you, as a doctor, whether you graduated forty years or two years ago, keeping step or time with the progress of the science of medicine?—West Virginia Medical Journal.

## SULPHARSPHENAMINE: INDICATIONS FOR ITS USE AND TECHNIC FOR INTRAMUSCULAR INJECTION

By IRWIN C. SUTTON \*

*Sulpharsphenamine is probably as active as neoarsphenamine when given in large doses, but only small doses (0.4 gm.) may be given in the muscles. It is very toxic in the abortive treatment of syphilis, and when large amounts are administered.*

*Purpura and peripheral neuritis do not seem to be as common following intramuscular injection as when the intravenous route is used.*

*When the drug is given correctly into the muscles severe reactions are few, but cysts may form in spite of all precautions.*

*Cutaneous reactions are frequent and must be guarded against to the utmost. This may or not may not be due to the concomitant use of mercurial inunctions.*

*Herxheimer reactions, probably due to the slow absorption of the drug, are rare, especially where a gradual introduction to treatment is made.*

*Discussion by Harry E. Alderson, San Francisco; Samuel Ayres, Jr., Los Angeles; Howard Morrow, San Francisco; A. Edward Roome, Los Angeles.*

**S**ULPHARSPHENAMINE is a formaldehyde bisulphite preparation of arsphenamine base. It is similar to neoarsphenamine, but according to Fordyce, Rosen, and Myers, differs chemically in its action toward dyes and in its oxygen content. Like neoarsphenamine, it also varies greatly in its composition, but is more stable both in and out of solution and has the important property of being tolerated by the muscles when injected intramuscularly by a correct technic.

This drug was a forerunner of neoarsphenamine, but was rejected by Ehrlich in favor of the latter, chiefly because of the lower activity and higher toxicity of sulpharsphenamine. The French prepared a product called sulpharsenol about 1918 which was investigated by Voegtlin in 1922. It was finally found that the American and foreign products were practically identical. The present status of this drug seems to be below not only arsphenamine but also neoarsphenamine in tolerability and trypanocidal action.

The chief advantage of sulpharsphenamine is that the drug may be given into the muscles. This is important for the physician who is not adept at venipuncture, particularly in infants and those patients with inaccessible veins. Intramuscular injection automatically removes those early or nitritoid reactions, due to the sudden administration directly into the circulation of powerful drugs. R. L. Sutton has for years practiced the intramuscular injection of old salvarsan in concentrated solution. Like Craig, he believes that "one intramuscular injection is worth two intravenous injections." The advantages of intramuscular injection may be summed up as follows: a slower absorption with more prolonged action on the infection, avoidance of early reactions, a simplified technic, and the fact that it may be used where venipuncture is difficult or hazardous.

The chief drawbacks are pain, either slight or severe, and the formation of cysts and painful nodules.

In early syphilis, abortive treatment with large and frequent doses of sulpharsphenamine is distinctly hazardous. The treatment usually carried out consists of an intramuscular injection of 0.4 gm. sulpharsphenamine every three days until three injections have been given; then one every five days until five more injections have been given. The mercurial inunctions are started with the third injection and continued until thirty are taken at the rate of six a week. Under this combined therapy, Stokes and Behn found that the spirochetes rapidly disappeared from the early lesions and that healing was prompt.

In latent and all late stages of syphilis the drug may be given every five days for a series of six to eight injections, depending on tolerance, and individual indications, with mercury in the form of inunctions. I have found the "clean inunction" method of Cole very useful in securing the co-operation of the patient in this procedure.

In central nervous system syphilis, sulpharsphenamine may be used before resort to the special procedures of spinal drainage, intraspinal administration of fortified and unfortified blood-serum and intravenous injections of tryparsamide. The early reports on sulpharsphenamine by Voegtlin and others as to its potency in neurosyphilis have not been confirmed.

In pregnancy the dose should be cut in half and mercury administered very cautiously if at all. For the treatment of infantile syphilis sulpharsphenamine is of great value, as shown by Boone and Welch. Crawford and Fleming of Glasgow, however, found its action, as judged by Wassermann tests, inferior to arsphenamine and neoarsphenamine, but the symptomatic results in congenital syphilis remarkable. Infants stand treatment with sulpharsphenamine very well and with but little reaction to the injections. The dosage should be about 15 to 20 mg. per kilogram of body weight. Mercurial ointment may be easily applied under the binder.

In cardiovascular syphilis and in acute syphilitic processes in structures where it is imperative not to produce a Herxheimer reaction, sulpharsphenamine may be used cautiously following preliminary treatment with iodids and mercury.

This preparatory treatment should consist of one or two weeks with rest in bed if necessary; potassium iodid in doses of five drops, gradually increased to fifty, three times a day, and daily intramuscular injection of  $\frac{1}{4}$  gr. mercury succinimide. Then intramuscular injections of sulpharsphenamine, starting with 0.2 gm. and increasing to 0.4 gm. every five days may be given and the mercury inunctions substituted for the injections.

While the statement appears on the ampule that sulpharsphenamine may be given subcutaneously, the pain and danger of sloughing precludes this method in my experience.

The essence of the technic for intramuscular injection consists in the dilution of the drug, and the amount of drug used. Following the suggestion of Claude Behn, I use three drops of sterile tap water for each decigram of the drug, and never inject more than 0.4 gm. and preferably 0.3 gm.

\* Irwin C. Sutton (Taft Building, 1680 Vine Street, Hollywood). M. D. University Southern California, College of Physicians and Surgeons. Graduate study; Johns Hopkins Hospital and Mayo clinic. Practice limited to Dermatology and Syphilology. Hospital connections: Hollywood Hospital. Publications: "Bismuth Treatment for Syphilis." Book in press.



Following the outline of epifascial injection technique given by J. H. Stokes, I have very few local reactions. This consists briefly of the following points:

With the patient lying prone with the toes in, the heels pointing out, the buttock is pulled down and the injection made by a quick down stroke with a long slender needle into the upper outer quadrant of the hip. The needle should slant slightly downward and inward. A bubble of air is injected on the top of the fluid, which acts as an air trap and, with the sliding of the muscles on their release, and the use of a slender needle, effectively prevents a backflow of the drug into the subcutaneous tissues along the needle tract. This leaking along the needle tract is the most common cause of painful indurations under the skin. I usually advise my patients to take a walk or climb stairs, for the exertion seems to help absorption and shortens the discomfort. It will be found that muscular and well developed people will stand the injections best; obese and nervous thin patients tolerate them but poorly.

#### TOXIC AND UNTOWARD EFFECTS

The complications of sulpharsphenamine treatment resolve themselves into those due to the deposition of an irritating drug in the tissue and those due to the inherent toxicity of the drug itself.

Painful reactions are not infrequent without the formation of nodules. These usually disappear with a sedative, hot sitz bath, or application of a heat lamp to the buttock. The nodular reactions are more lasting and may require repeated hot applications before they leave. Several times, on aspirating before injection, I have drawn up chocolate-colored fluid into the syringe from an old cyst. These cysts may not be seen on the surface, and only discovered by deep palpation. They are usually painless and their presence unknown to the patient. Abscess formation is practically unknown, but has been reported in obese patients. This was probably due to the deposition of the drug in the fatty tissue by too short a needle.

Peacock and Stokes and Behn have reported purpuric spots on the skin and mucous membranes after the intravenous use of sulpharsphenamine, but I have never known it to follow the intramuscular injection.

Belding noted a high incidence of peripheral neuritis in his patients who received large doses at frequent intervals. This is a serious objection, but does not seem to occur very often following intramuscular injection.

Erythrodermias following the use of sulpharsphenamine are very common when large doses are given directly into the veins. In combination with inunctions of mercury the intramuscular injection of the drug also gives a high percentage of cutaneous reaction.

Thus in the abortive treatment for syphilis three out of five patients developed a rather severe generalized dermatitis when the inunctions were started, after the third injection.

One man who had been saturated with cacodylates was put on sulpharsphenamine intramuscularly

for nonspecific treatment. Four hours after his first injection he had to scratch his feet because of the intense itching. He was promptly relieved by the intravenous injection of 1.0 gm. of sodium thiosulphite and atropine by mouth. He was alkalized with soda bicarbonate, and another injection given three weeks later. Next day, over the site of the injection, there was a large area of confluent urticarial wheals with scattered papules over the body.

An elderly man with cardiovascular syphilis was given mercury by inunction and small injections of sulpharsphenamine weekly after a thorough preparation. After his fourth injection he noticed some itching, but said nothing about it. After his fifth, he presented acute generalized edema of the skin with extreme itching. He was given soda by mouth, large doses of thiosulphite into the veins, and drastic catharsis. However, this did not prevent him from having a typical attack of dermatitis exfoliativa, although the duration was only about two weeks.

#### DISCUSSION

HARRY E. ALDERSON, M. D. (490 Post Street, San Francisco)—Sutton's description of intramuscular technique is instructive and interesting. As he states, the chief advantage in the use of sulpharsphenamine is in its availability for intramuscular injection. Unfortunately there are occasional cases where intravenous therapy cannot be administered. It is in these cases and in congenital syphilis that the drug is particularly useful. Sutton calls attention to untoward effects. It is true that even with good technique painful persistent nodules or cysts develop occasionally. However, it seems to be safer and more free from bad after-effects than the other arsphenamines given intramuscularly.

When this drug first came out we tried it in the Stanford skin and syphilis clinic by the intravenous route. We treat there about 150 cases of syphilis weekly, so the drug was given a fair trial. We had to abandon its use intravenously, for most of our patients were upset and many of them very much so. Severe persistent vomiting was the principal symptom. There were no fatalities, however. From our experience we concluded that it was therapeutically inferior to the other arsphenamines, and for this reason, and also on account of the severe reactions produced, was not desirable for intravenous administration, but it had certain value as a spirochaeticide by intragluteal injection.

SAMUEL AYRES, JR., M. D. (Westlake Professional Building, Los Angeles)—I have had very little occasion to use sulpharsphenamine. In the few cases in which I have, it was given intravenously without harmful effects. I have seen two cases of dermatitis exfoliativa, resulting from the intramuscular administration of sulpharsphenamine. I do not see the necessity of using the intramuscular route, even in very young infants. An adequate dose of neoarsphenamine for an infant can be dissolved in one or two cubic centimeters of water and can be injected very easily into one of the scalp veins, especially on the side of the head or in the middle of the forehead.

When the baby cries, as it inevitably does under such circumstances, the veins are distended and no tourniquet is needed. The injection is made, using a hypodermic needle and a 2 cc. syringe.

HOWARD MORROW, M. D. (484 Post Street, San Francisco)—Sulpharsphenamine is a valuable addition to the other arsphenamines. It cannot replace arsphenamine or neoarsphenamine, but when intramuscular arsenical medication is indicated it is the preparation of choice. When given intramuscularly it is less painful than neoarsphenamine and has many advantages over the older arsphenamine preparations. Many investigators claim that sulpharsphenamine is of greater value in cerebrospinal syphilis or neurosyphilis in general.

Its value in hereditary syphilis cannot be questioned. When intramuscular arsenical medication is indicated we

give sulpharsphenamine weekly for ten injections, and for adults the dose should be 0.6 grams each.

A. EDWARD ROOME, M. D. (Medico-Dental Building, Los Angeles)—In my opinion sulpharsphenamine has a very definite place in therapy, and after a thorough trial of this drug at my clinic I have come to the same conclusion as to its value as mentioned by Alderson.

There is no doubt that its use intramuscularly is the ideal way of administering the drug on account of the slow absorption and its practical freedom from nitroid reactions.

## DERMATOLOGY AS MEDICAL SCIENCE, HEALING ART AND PRACTICE OF MEDICINE †

By MOSES SCHOLTZ \*

THE dermatologist engaged in unraveling and solving the diagnostic and therapeutic problems of individual patients hardly ever pauses long enough to survey the field of dermatology as a whole. Yet a study of dermatological research, of its possibilities and limitations; of the evolution of dermatology as a science; and the analysis and study of the relationship of the component units of dermatologic thought—morphology, histopathology, and pathogenesis is of great value and interest.

Besides the purely abstract and academic aspects of the subject, many practical problems of dermatology invite study, such as the relationship of dermatology to general medicine and to other specialties and the establishment of proper boundaries between them; the teaching of dermatology to undergraduates and graduates; the organization of dermatologic service in hospitals and clinics; the statistical survey and study of skin diseases, the analysis of dermatologic literature, cosmetic dermatology, dermatologic quackery, etc.

### WHAT IS DERMATOLOGY?

The generally accepted definition is simple and implies the study and care of all diseases and lesions of the skin. But the establishment of the strict boundaries of dermatology from other branches of clinical medicine is not so easy, since skin lesions often develop as passing, incidental and minor symp-

toms of various more general diseases. The dermatologist is interested in them from the diagnostic point of view only.

Trophoneurotic or vasomotor dermatoses, such as Raynaud's disease, trophoneurotic ulcers and degenerations are described and treated simultaneously in manuals of dermatology, surgery, neurology, and medicine. It is my belief that dermatology should comprise any and all skin lesions, whether they are big and lasting enough to constitute independent dermatologic entities or are merely an incidental symptom of systemic affection. In the latter case the lesions should be accorded a proper place in the morphologic classification.

### DERMATOLOGY VERSUS GENERAL MEDICINE

Because of the enormous frequency of skin lesions as manifestations of systemic conditions, only a very small fraction of the grand total of patients with skin lesions reach dermatologists; as a rule, only those that present diagnostic or therapeutic difficulties. The overwhelming majority of patients with skin lesions are treated by general practitioners, pediatricians, surgeons, and radiologists. Yet practitioners frankly admit their inadequate knowledge of diseases of the skin. The peculiar lack of interest in and disregard for dermatology as a specialty of medicine, in my opinion, is due to the defective methods of teaching dermatology.

This situation brings to dermatologists an all-important duty of restoring the interest and esteem of the general profession to his specialty. Some practitioners consider dermatology rather detached from the general subject of medicine, the understanding of which can be acquired only by an accumulated experience of many years.

It is my experience that the general practitioner, if demonstrated the rational methods of differential diagnosis, quickly grasps the idea that dermatologic diagnosis is more than an empirical product of individually accumulated experience, and he begins to enjoy the intellectual process of arriving at diagnosis through the correct principles and technique of differentiation.

### DERMATOLOGY AS SCIENCE

The analytical study of the resources and limitations of dermatology as a medical science is a fascinating but insufficiently clarified problem. Some of the fundamentals may be deduced from the analysis of the skin as a subject of study. The skin being located on the surface of the body is subject to direct examination. This unique diagnostic and therapeutic opportunity explains why the inspection plays such a dominant part in dermatologic diagnosis. The extensive area occupied by the skin and the possibility of innumerable variations in localization, distribution, grouping and shape of lesions, makes for the steady growth of morphology as a paramount factor in dermatologic diagnosis.

The technical ease and impunity with which a biopsy can be performed has led to the development of another important diagnostic method—the histopathological examination. This dual morphologic and histopathologic basis of the dermatologic

† Chairman's address, Section on Dermatology and Syphilis, presented at meeting of California Medical Association, Oakland, California, May 1, 1926.

\* Moses Scholtz (718 Brockman Building, Los Angeles). M. D. University of Moscow, Russia, 1900. Graduate study: "Charite," Berlin, Germany, 1902-03. Practice limited to Dermatology since 1910. Hospital connections: Attending Dermatologist Los Angeles General Hospital; Dermatologist to School of Graduates, Los Angeles Medical Department University California; Consulting Dermatologist Kaspars-Cohn Hospital. Previous honors and services: Chief of Clinic of Dermatology and Syphilology, Medical Department University of Cincinnati, 1915-16; Chairman Dermatologic Section Los Angeles County Medical Association, 1922. Publications: "Modern Diagnosis and Treatment of Chancroids" (Urologic and Cutaneous Rev., Vol. 15, 1913); "Principles of Dermatologic Diagnosis and Treatment" (Lancet-Clinic, November 15, 1913); "Therapeutic Resources of Modern Dermatology" (Therapeutic Gazette, May, 1915); "Trend of Modern Dermatologic Research and Its Bearing on the General Medicine" (New York M. Journ.); "Borderline Types of Seborrheic Dermatitis and Psoriasis" (Calif. State Journ. Med., May, 1920); "Dermatologic Misnomers" (Arch. Dermat. and Syph., February, 1920); "The Skin as an Index of Health" (Med. Rec., May 5, 1920); "Dermatoses of New-Born and Infants" (Arch. Pediat., February, 1921); "Lupus, Erythematous Acutus Disseminatus Hemorrhagicus" (Arch. Dermat. and Syph., October, 1922); "Trichophytosis of the Glabrous Skin as a Clinical Problem" (New York M. J. and Rec., April, 1926), and many others.



diagnostic technic has been for a long time the only accepted procedure, and even now is sufficient in many patients. However, with the steady growth of the laboratory, various procedures, such as urinalysis, blood chemistry, bacteriologic examination, etc., are invoked with ever-increasing frequency.

#### MORPHOLOGY VERSUS HISTOPATHOLOGY

The relative value of morphology and histopathology in dermatologic diagnosis is of great interest. Theoretically, by analogy with other branches of clinical medicine, the histopathologic findings should be the final verdict in the interpretation of skin lesions. Actually, histopathology has proved to be a great disappointment. Only in certain selected patients does it supply definite diagnostic information not revealed by the clinical and laboratory findings. In many cases, particularly inflammatory dermatoses, it is indefinite and inconclusive.

#### MORPHOLOGY

The final value and function of morphology in dermatologic research deserves a more detailed consideration. Being historically the first basic dermatologic conception, morphology has developed more extensively than any other phase of dermatologic research. Because the minds of dermatologists for many generations were dominated by the static conception of dermatoses, as rigid and stationary morphologic patterns or pictures, this growth has assumed an exuberant and inward form. As a result, over-refinement and multiplication of morphologic details became an end and purpose. The structure of morphology grew so immense as to become a source of despair and a bewilderment to the general practitioner and an object of confusion even to a trained dermatologist. An enormous amount of effort is still wasted in many dermatologic contributions in fruitless efforts to establish a new dermatologic entity on morphologic details.

#### DYNAMIC VERSUS STATIC MORPHOLOGY

The adverse and hampering effect of the excessive growth of static morphology on the clinical, didactic and research work in dermatology was pointed out two years ago at the meeting of the Section in Los Angeles. At that time I stressed the irrationality of the static morphologic conception of dermatoses and attempted to introduce the dynamic point of view. The dynamic conception of skin morphology interprets skin lesions as merely skin reactions to systemic or local irritants—reactions which are unstable morphologically and which can merge and combine with each other, or even transform one into another. The hypothesis of the morphologic instability of cutaneous lesions, in my opinion, is the only one that solves the difficulties and inconsistencies of the present classification. The astounding progress of dermatology in the last generation is due directly to the influx of the dynamic biologic ideas and principles from general medicine and applications of these ideas to the pathogenesis and treatment of dermatoses. The theories of focal infection, of endocrine secretions, of anaphylaxis, of nonspecific proteid immunization, are all based on a fundamental dynamic conception that systemic skin dis-

eases are merely biologic skin reactions capable of a great morphologic mobility and variability. The obvious inference is that the insistence on the minutest morphologic details as the permanent characteristics of individual dermatoses, as it has been done in the past, is not in accord with the whole modern dynamic conception of the pathogenesis of dermatoses. Neither is the static conception born out by clinical observation, since morphologic phenomena of dermatoses are liable to various secondary changes during the course of their clinical evolution.

#### DERMATOLOGY AS HEALING ART

Since the primary function of any branch of medicine is healing of disease, the evaluation of dermatology as a healing art is of great practical interest. Among the factors which are important in the evaluation of any branch of medicine as a healing art can be considered the frequency of the particular type of affection, the exactness and efficiency of diagnosis, the character of prognosis, the efficacy of treatment, and the objective and subjective quality of service.

The relatively larger area of the skin in comparison with any other organ multiplies tremendously the possibilities of the occurrence of the skin lesions. The very conspicuousness of the skin lesion in contradistinction to the lesion of a visceral organ precludes the possibility of its being overlooked or ignored, and renders the skin lesion one of the most common. As a rule a patient with a skin lesion is prompted by a triple motive to seek medical advice, the distressing itching, the disfigurement, and the horror of skin diseases, since many laymen believe that many skin diseases are expressions of a blood poisoning breaking out on the surface. The value of the service of the dermatologist to the individual and community is not realized generally. The dermatologist, through a correct interpretation of skin lesions which may be the earliest or the only symptom of a systemic serious disorder, often is capable of detecting the first sign of an impending danger. Thus the timely recognition of the dermatologic syndromes of syphilis, tuberculosis, diabetes, leukemia, endocrine disorders, and skin cancer is part of the daily work of a dermatologist. The value of dermatologic training in the recognition of infectious exanthemata and contagious diseases is obvious.

#### DERMATOLOGIC DIAGNOSIS

The diagnosis of skin diseases is much easier than in other branches of medicine because all the evidence is on the surface. It requires no complicated instruments or technic to bring out symptoms. Adequate training of visual acuity, experience and, most important, solid grounding in dermatologic reasoning and principles of differential diagnosis are essentials to competency to make a correct diagnosis. Dermatologic diagnosis is based more on objective and less on history and laboratory findings than in other specialties. It is possible to make the diagnosis on the mere inspection of the lesions in the majority of patients and to place them in a certain clinical morphologic and pathologic group. The full history and laboratory findings are desirable for each and every patient, but in sharp contrast to internal medi-

cine they are not always necessary. In many patients they merely supply details of information in regard to the etiologic factors and pathologic structure.

#### DERMATOLOGIC PROGNOSIS

Some laymen have an extremely pessimistic attitude as to the curability of skin diseases. This is not surprising, considering the fact that modern actinotherapy, which has completely revolutionized the treatment and prognosis of skin diseases, is hardly a generation old. Particularly interesting and even amusing is the widespread idea among laymen that eczema is an incurable disease; even more interesting is the fact that some physicians also consider most of the chronic skin diseases as practically incurable and subject, at the best, only to temporary improvement. This attitude is to be explained by the unfortunate fact that some physicians are helpless when called upon to treat a chronic dermatosis even of a quite usual type, because of the lack of dermatologic training in diagnosis and treatment and also because of the lack of modern therapeutic equipment.

The rapidity of improvement under modern dermatologic treatment of a patient who has resisted many months, or even years, of haphazard and indifferent attention is so striking as to emphasize most dramatically the defectiveness of dermatologic training in medical colleges, particularly of the last generation. The tremendous advances in diagnosis and modern actinotherapy have improved immensely the general prognosis of skin diseases. We still have some rebellious and even incurable dermatoses, but they are comparatively rare and shade numerically into insignificance compared with the enormous number of patients whom we are able to cure, or at least give partial relief. Most patients with localized dermatoses tumors and growths, including skin cancer, parasitic and mycotic dermatoses and infectious granulomata are entitled to excellent prognosis. Most of the inflammatory dermatoses, particularly eczema, lichen, lupus erythematosus, acne and many others yield readily to modern treatment.

The most intractable and persistent are the neurotrophic, vasomotor degenerative, disturbances of pigmentation, diseases of the nails and hair. We have to admit that the old thorn in the dermatologist's crown, psoriasis, is still practically incurable and admits of only temporary improvement.

#### DERMATOLOGIC TREATMENT

Dermatologic therapeutics consists of internal and local medication and physiotherapy. In chronic dermatoses, physiotherapeutics, by its superior efficiency, has largely superseded ointments and lotions, which are used at present only as supplementary treatment. Medication is limited to a small number of drugs. However, their use in various strength and combinations offers possibilities of great shading in dosage and numerous formulas. The most common therapeutic error in the treatment of skin diseases is overtreatment and excessive use of irritating ingredients. This is largely due to lack of individualization, which is the result of an old-time habit inherited from medical college where stock formulas

and prescriptions are recommended for various dermatoses. This responsibility obviously lies with the defective method of teaching dermatology by failure to emphasize that individualization is the most important factor in successful dermatologic treatment.

#### DERMATOLOGY AS PRACTICE OF MEDICINE

The practice of dermatology offers to its devotee opportunities for intellectual activities and scientific study equal to those in any other branch of medicine. It requires correct color perception, power of observation of minute morphologic details, balanced clinical judgment and analytical capacity in making differential diagnosis. To avoid the pitfalls and deficiency of overspecialization it requires an understanding and grasp of general medicine and pathology. The modern technic of dermatologic diagnosis and modern therapeutic armamentarium offer to a dermatologist splendid, and compared with other branches of clinical medicine, a comparatively easy means and splendid equipment, for efficient work.

To relieve a patient of distressing itching, which, if prolonged, is more intolerable to many than most intense pain; to free him of disfigurement, which makes life for many, particularly women, unbearable; to free him from the agony of fear of blood disease makes the skin patient extremely appreciative and renders the life of a well-trained dermatologist pleasant and rich in satisfaction.

Lastly, dermatology, as a specialty, pays well for the hardships and cost of good training. It is a matter of wonder and regret that the young men of the profession neglect and overlook this splendid opportunity for professional advancement, and crowd surgery and other branches of medicine where they are not needed. Dermatology at present is one of the few branches of medicine where the supply, even in the large cities, is far below the demand. There are cities of 50,000 to 100,000 without a well-trained dermatologist.

The old time-honored but irrational and illegitimate liaison of dermatology and genito-urinary diseases fortunately is becoming a matter of the past. Either of these specialties, having nothing in common but tradition, is big enough by itself to be a life study and to tax fully the intellectual capacity and skill of any man.

#### HOSPITAL SERVICE AND CLINICS

One of the important and pressing problems before dermatologists is to gain for dermatology the high status of recognition which is its due. It is lamentable that even in large hospitals dermatologists do not gain proper recognition and the dignity of an independent service and separate wards. The dermatologist acts mostly as an ambulant consultant for other departments. An out-patient skin clinic is so far his only unchallenged abode. The abnormality of such condition and the adverse effect on the quality of dermatologic service and clinical research is obvious. The creation in public clinics of a dermatologic service separate from the urological department is another problem of only slightly less importance.



## POSTGRADUATE CLINICS

I believe that an educational campaign of intensive courses in dermatology is badly needed and can be successfully inaugurated. It is my contention, proved repeatedly in graduate courses, that in six weeks of intensive training a general practitioner can be taught the best methods of dermatologic reasoning and master a sufficient number of basic facts of differential diagnosis and rational dermatologic medication to enable him to diagnose and treat intelligently an average patient.

## DERMATOLOGIC QUACKERY

One of the most crying, though by no means a new evil in dermatologic practice, is dermatologic quackery. The steadily growing utilization of physiotherapy in dermatology has brought out an incubus of a commercial exploitation of these agencies by the irregular cultists, beauty parlors, and outright quacks. The intensive publicity campaign by the manufacturers of physiotherapeutic appliances and extravagant exploitation of the medical literature for commercial purposes has brought out the indiscriminate and promiscuous use of physiotherapy in skin diseases by those who have the price of the machinery. The unfortunate social and professional consequences of this situation become daily more tangible. The gullible public is being again gouged and exploited by fraudulent claims of pseudoscientists. Physicians, on the other hand, are being injured by the recoil of public opinion charging them with a responsibility for the failures of the incompetent and the unscrupulous. Physiotherapy in skin diseases is in danger of being discredited as a useless and fraudulent practice. It is our duty as dermatologists to counteract the flood of commercialism and to restore dermatologic physiotherapy to the high status to which it is entitled.

## COSMETIC DERMATOLOGY

The last, but by no means the least, problem before us is so-called cosmetic dermatology. The hectic movement of modern society toward an exaggerated appreciation of physical attraction and cult of personal beauty has caused an enormous demand for remedies and methods of improving the facial complexion, hair, nails, etc. This demand has been amply supplied and in fact cultivated by beauty parlors and individual beauty specialists. As an extreme manifestation of this tendency, there has developed plastic surgery of cosmetic facial corrections, straightening noses, removing of wrinkles, lifting chins, etc.

The number of women who, in the quest for beauty and rejuvenation, have been permanently injured, disfigured or even killed by cosmetic operations, paraffin injections, peeling cures, etc., at the hands of beauty specialists is steadily mounting to an alarming degree.

Dermatologists engrossed in more serious problems are likely to assume a holier-than-thou attitude and consider it below their dignity to cater to cosmetic dermatology. I plead guilty to this very feeling in the matter. Yet I believe the only effective measure of counteracting this destructive wave of

quackery is for the dermatologists to take up this work and integrate it into their practice.

A happy compromise may be reached by dermatologists doing only diagnostic and surgical work, and supervising the technical and mechanical work which can be done by nurses and technicians. It is my firm belief that the public at large will greet with delight such a step, since the public patronizes the quack and cultist only because the physicians refuse or are unable to render the requested type of service.

## CONCLUSION

This discourse presents the chief problems pressing for solution in the field of dermatology. I believe that they deserve serious consideration. Their importance is based on the fundamental principle that in medicine, as in any other branch of science, the solution of the practical problems depends ultimately on correct understanding and knowledge of underlying abstract principles, basic general laws and the relationship to each other of various parts of the respective science.

## THE DISCUSSION OF SCIENTIFIC PAPERS †

By WILLIAM H. DUDLEY \*

*THE EDITOR—Doctor Dudley here frankly discusses a deadly poison which is chiefly responsible for so many lethargic medical gatherings. His timely message about speakers applies with even greater force to writers. After all, a speaker may lull only a handful of people into somnolence, but the poorly prepared published message wearies thousands who are ever searching for worthwhile messages, and it invariably defeats one of the objects of the author—the laudable desire to secure the good-will of his colleagues.*

*The biographies of great orators, statesmen and scientists inform us that their successful "extemporaneous" addresses had had much study and many rehearsals.*

*Successful authors, practically without exception, revise their manuscripts from five to ten times before they submit them to an editor. It took Carl Sandburg over twenty years to write the Lincoln "Prairie Years," now pronounced the American epic.*

*While Doctor Dudley's advice was directed to the members of the Eye, Ear, Nose, and Throat Section of the California Medical Association, it is good medicine, so to speak, for all speakers and writers.*

THE formation of the habit of clear thinking and the proper expression of one's thoughts while standing before an audience is well worth the effort and practice, however much it may require to enable one to properly present the subject in mind;

† Chairman's Address, California Medical Association's Section on Eye, Ear, Nose, and Throat, delivered at Oakland, April 29, 1926.

\* William Henry Dudley (520 West Seventh Street, Los Angeles). M. D. University New York City, 1882. Graduate study: University of California, Los Angeles, 1906; Ophthalmic and Aural Institute, New York, Resident Assistant. Practice limited to Eye, Ear, Nose, and Throat since 1893. Hospital connections: Surgical Staff Hollywood Hospital. Previous honors and services: Air Service, Chief Examiner, Aviation Eye Service, Los Angeles, 1917-18. Publications: "Cerebral Abscess Following Chronic Otitis Media: Operation, Recovery, Laryngoscope, 1900"; "The Prognostic Importance of Inflammation of the Optic Nerve and Retina in Chronic Bright's Disease" (Lehigh Valley Med. Mag., Vol. 6); "A Few Reasons for Early Operation in Acute Mastoiditis" (Penn. Med. Journ., 1901); "Metamorphosis Varians" (Journ. A. M. A., 1902); "Absorption of Lens Nucleus in a Patient, Age 66 Years" (Ophthalmology, July, 1913); "Parosmia" (Transactions of Lar. Rhin. and Oto. Society, 1918); "Perspective for Aviators" (American Journ. Ophthal., February 1919), and about fifteen others.

and nowhere is it more valuable as an asset than while discussing a subject which has already been presented in the form of an essay upon some scientific subject, or the relation of some investigation or experience, or perchance the presentation of a medical or surgical case to a medical society.

It is not the good fortune of all men to have the native ability to acquire this faculty, or the proper training to enable them to acquit themselves with credit to themselves or to the subject which they wish to discuss; yet, there are few graduating in medicine at present who cannot overcome the handicap of lack of native talent, if they will but make a decided effort and persist in the effort; and in the mind of the chairman of this section, *it is the duty of those who would receive the greatest benefit from these, and all other medical society meetings, that they fit themselves with the ability to take an intelligent and active part in these discussions.*

The value of medical meetings to its members is in direct relation to the amount and value of the information presented in the papers read, their intelligent discussion, the making and renewal of acquaintances, and the social contacts. The intelligent discussion of a scientific paper presupposes an intimate acquaintance with one or more items covered by the member in his essay; and in order to be able to do this the program should be studied somewhat in advance, and the particular items desired to discuss selected and noted. Should the member desire to present a case apropos to the subject, he should have an abstract of the history, and he should review it well, that there may be no hesitancy or inaccuracy in the report; at the same time it should be well boiled down that he may not overstep the allotted time for discussion. Accuracy and brevity in reporting histories can hardly be overestimated. Frequently these reports are abstracted and embodied in other reports, by other writers. In any case, should a discussant desire to comment on some one or more points of importance, of which he is not sure, he should look up authority on the subject that he may not get into hot water, so to speak, from some question handed him from the floor. Apropos to this particular thought, the following instance is cited: A member of this section, some time since, was asked to open the discussion on a report of a rare case with which he realized his lack of familiarity. He therefore called up a medical librarian, and asked for everything published on the subject. These he abstracted and condensed, and when presented the discussion was many times more valuable than the article presented, which consisted of a report of an unusual case with but very little comment or general consideration. The orderly presentation of discussion is fully as important as the presentation of the original paper.

Another point we should bear in mind is to be sure and adhere closely to the subject under discussion. Many a member has wasted much valuable time by relating case histories which, before he has finished his discussion, are found perhaps remotely related to the subject, but not apropos. Yet when the member finally takes his seat, he does so with the apparent feeling that he has added much to the

value of the meeting. Another item in this subject is the habit some have of wandering entirely afield from the subject in hand; and if the chairman does not lasso him and bring him back—something no chairman likes to do—valuable time is wasted. Another habit some have is to feel called upon to discuss papers, whether they have any constructive information in mind or not. Some such are well informed, and what they say is apropos, well presented and correct, but it may be common information, and few care to listen to matters with which they are perfectly familiar.

I believe the thought must have occurred to the most of us while listening to a member who has the floor with something in his mind of more or less importance—at least to himself—that he is laboring under such a serious handicap, that an attempt to follow him requires a degree of mental concentration which few care to exercise. I have often thought that if some speakers could hear their own discussions exactly as they are delivered from a phonographic record, it would give them the surprise of their lives. This refers to one of the unfortunate, yet not uncommon, habits of hesitation, as though the speaker were having difficulty in formulating his ideas in speech, or possibly could not recall just what he wished to relate, or peradventure his mind was trying to work and take a vacation at the same time. We will say he is relating a case something as follows: "He—a—had a—a—nasal discharge—a—for—many years, a—and his nose—a—a—had been—a—operated on—a—many times. There—a—had been—a—periods—a—during the past—a—ten years—a—when—when he was—a—entirely free—a—from—from symptoms." While attending a medical meeting not long since, a member took up the discussion of a subject upon which he appeared to be well informed, and if he could have related what he had in mind in a straightforward and connected manner, it would have been of value, and well worth listening to. It occurred to me soon after he began his remarks to count the times he repeated this interjection. I found in the five minutes more or less he was speaking he repeated the —a— seventy-five to eighty times. It is not only the mental fatigue the audience must sustain, but the time wasted, and the section finds itself getting behind its schedule.

There is another trait seen occasionally which is not informing nor constructive, and it always leaves a "bad taste in the mouth," so to speak, with those listening. It can hardly be called a habit, but rather an unfortunate mental attitude. These members appear to feel that the only procedure in discussion of a paper is to try to pull it to pieces, either to dispute opinions well formed and substantiated by good authority, or to dispute the facts as presented regarding well worked-out histories, and set at naught the work of an intelligent member which has taken him months to formulate. Such members are a true "thorn in the flesh" of any society whose misfortune it is to include their membership. This last criticism is not intended to refer to honest differences of opinion regarding some mooted question where men may honestly differ, nor to men of ability



and experience who have divergent results regarding methods of operating, or other means of relieving diseased conditions.

Again, there is occasionally seen the member who seems possessed with the idea, seemingly, that in the multitude of words there is wisdom. Perchance the speaker may be a visitor from some other society—this has been noted—who out of courtesy is asked by the chairman to "say a few words," and this visitor takes advantage of circumstances to go the limit, so to speak. He appears to feel that as a guest of the society he is not likely to be limited as to time, and talk he does, and when at last he has finished, not one in twenty can give any satisfactory account of his discussion, but he has enjoyed himself immensely. This last criticism is a digression from the title of the address, for which I apologize. Yet it is apropos in a sense, for it represents a genus of a certain type, which is entitled to a certain amount of attention.

It is not the purpose of this address to present all of the don'ts applicable to all kinds of abuse which an individual may inflict upon an audience of scientific men, for there are many others which will occur to any regular attendant upon medical meetings. One may mention briefly the importance of the use of good Anglo-Saxon, which is far better than part English, some French, German or Italian, which some appear to feel they must use to show their superior culture, otherwise the audience might never know that they were learned in these languages. Some appear to forget, for the time at least, that they are members of a learned profession, and as such should use unadulterated English. All too frequently we listen to discussants who tell of "getting by," "putting over," and any number of like expressions current on the street, but not dignified language to be used in a convention of educated physicians.

There are few occasions of more delightful interest to the average physician than to listen to a discussion by someone who has something in mind, the result of mature thought, and speaks concisely in good understandable English, in well-rounded sentences, properly condensed, each complete in itself without embellishment. This discussant takes you with him wherever he goes, you listen to his remarks with unalloyed pleasure, and when he sits down you have the lesson he brought, and you are likely to take it home with you without the aid of a notebook.

John Locke, gentleman and philosopher and author of the world-renowned "Essay on the Human Understanding" and a contemporary of Sydenham, wrote in 1690 a book on child welfare under the title "Some Thoughts Concerning Education." In his preface he says: "I myself have been consulted of late by so many who profess themselves at a loss how to breed their children, and the early corruption of youth is now become so general a complaint that he cannot be thought wholly impertinent who brings the consideration of this matter on the stage, and offers something if it be but to excite others, or offer matter of correction. For errors of education should be less indulged than any. These, like faults in the first concoction, that are never mended in the second or third, carry their afterward incorrigible taint through all the parts and stations of life."

## THE PHYSIOLOGY AND MINOR PATHOLOGY OF THE FUNCTIONING BREAST †

By J. W. SHERRICK \*

NURSING is not a one-sided proposition of giving on the part of the mother. For her it has mental, moral and physical effects, favoring a better involution of her pelvic and abdominal organs; a better drainage of milk and of desquamated and degenerated cells and cell detritus; a more robust and radiant health for herself; and developing more fully those finer mental and moral qualities peculiar to the matron. Mother's milk with its vitamins and immune substances and its proper food and chemical content is the ideal food for the baby and in the majority of infants a specific saving many lives and ensuring a healthy and well-nourished child. In spite of the fact that our highly civilized, high-tension, modern city life with its improper hygiene and abnormal surroundings renders nursing more difficult than was the case with our grandmothers whose lives were simple and natural, startling results can be obtained by proper rest, exercise, diet, and determination.

Once lactation is established, adequate stimulation based upon demand and proper suckling maintains this function. Hormones and internal secretions from the ovary and placenta undoubtedly prepare the breasts for lactation and inaugurate this function. It is also probable that internal secretions influence its continuance, but their exact character and importance are not known. The secretion of milk is not under the direct control of the nerves supplying the breast, but nervous and psychic influences do reduce the milk supply and decidedly alter its character. This action is indirect with probable metabolic and digestive changes or altered food and fluid intake playing a part. The conclusion has been reached, too, through scientific study of the various so-called galactagogues that none is of marked value in increasing mammary secretion, any beneficial effects being mainly psychic. Undoubtedly, physiologic methods, general tonic effects, an adequate diet and proper hygiene are decidedly effective, but still there are numerous instances where apparently definite beneficial results are obtained from galactagogues. We should bear in mind, too, the fact that various drugs are excreted in the milk and may affect the child, examples of which are potassium iodid, mercury, salvarsan, calomel, bromides, and various cathartics.

A feeding schedule that is strictly adhered to is very essential. A period of at least six hours im-

† Address as chairman of the California Medical Association's Section on Obstetrics and Gynecology, delivered at Oakland, May 1, 1926.

\* John Wesley Sherrick (350 Twenty-ninth Street, Oakland). M. D. University Michigan, 1915; B. S. University Michigan, 1912. Graduate study: University Michigan, 1915-17; Johns Hopkins, 1915. Practice limited to Obstetrics and Gynecology since 1921. Hospital connections: Fabiola Hospital, Oakland. Previous honors and services: Assistant Professor Obstetrics and Gynecology, University Michigan; United States Army (overseas), 1917-19. Scientific organizations: Alameda County Medical Society, California Medical Association, and American Medical Association. Publications: "Effect of Potassium Iodide on the Luetin Reaction" (A. M. A., 1915); "Backache in Gynecological Conditions" (Michigan, 1921); "Treatment of Early Carcinoma of Uterus" (California, 1924).

mediately following delivery should elapse before nursing to allow of adequate rest for both the mother and the babe. The mother's rest should not be disturbed at night during the first two weeks, providing this is feasible and the breasts are not too engorged and painful, a night feeding of a simple formula being utilized. I favor the use of water and a five per cent lactose solution after nursing during the first twenty-four to thirty-six hours and of a simple formula thereafter while the breast secretion is being established. I feel that in this procedure the initial loss in weight is lessened and that there is less dehydration and less lowering of the baby's resistance. A short nipple with a small opening should be used to avoid the baby's developing a preference for the bottle with its easily grasped nipple or forming poor nursing habits with resultant inadequate stimulation of the breast and, consequently, a reduced milk supply. The general principle of the long and regular nursing interval rigidly adhered to, and with strict rotation, is the most satisfactory with the average infant. A six-hour nursing interval is best during the first twenty-four to thirty-six hours, followed by a three-hour period during the day for children under seven pounds or a four-hour period for strong, robust infants over this weight. This is maintained, providing the child gains weight and sleeps well. There should be a maximum of eight feedings in twenty-four hours and less, five or six, if satisfactory. Such a schedule permits of a longer interval for the breast to recuperate with more milk of a uniform quality; it ensures a keener appetite, better nursing habits and, therefore, more complete emptying of the breast with better stimulation; it favors better digestion; it means less overfeeding and permits more rest and leisure for the mother with a more stabilized nervous system and peaceful household. If the milk flows too freely, the simple expedient of checking the infant frequently or maintaining steady pressure with the fingers against the milk ducts through the areola will usually suffice. In the event of underfeeding, the long interval with both breasts at each nursing is preferable to more frequent feeding. Some favor the routine giving of both breasts at all times, giving three-fourths of the nursing time on one breast and one-fourth on the other alternately. The question of the use of a complemental feeding must be guided by such factors as the weight curve, milk supply, and the health of the mother. In any event, a complemental feeding should be a simple mixture of milk, water and lactose given only after nursing, a short nipple with a small opening being used. The amount should be accurately estimated and every effort made to secure thorough stimulation of the breast by manual expression or by pumping. After a few weeks, a supplemental feeding once daily may be wisely used to permit of social engagements and relaxation for the mother.

Normal babies will usually nurse if there are no physical reasons, such as deformities about the mouth, particularly tongue-tied, nasal obstruction, nipple and breast difficulties, etc. Every attempt must be made to assist and encourage the child and care must be taken to avoid the very gross errors

in the technique of nursing based on ignorance, carelessness, over-anxiety and indifference on the part of the mother. Both the mother and babe should be relaxed and comfortable. The mother should be warned against the eye strain with headache caused by "ogling" the baby while he nurses. The baby's entire body should be supported to avoid undue muscular effort and tiring and the nipple should be easy of access to permit ease of swallowing and breathing. It is difficult to lay down a hard and fast rule for the duration of a feeding as much depends on the vigor and appetite of the child and the readiness with which the breast yields its milk. The duration should rarely exceed twenty minutes. Longer nursing impairs the resistance of the nipple and in the presence of a good nurser is a sign of insufficient milk.

The amount necessary to ensure a well-nourished and contented child varies somewhat with the individual. The size of the infant's stomach does not control his capacity, and any excess of milk undoubtedly passes directly into the intestine. While the general condition and reaction of the babe is an index as to whether sufficient nourishment is being taken, a good rule is to secure, with a simple, but accurate household scale, a daily weight taken at the same hour and under the same conditions. The gain should average four to six ounces weekly. Results should be based on an average over several days and it is well to warn the mother against drawing conclusions from one day's weight picture. If the child is not receiving from the breast sufficient nutrition for proper growth, every effort should be made to continue and increase the breast activity by encouraging proper and thorough nursing habits, by using both breasts at each feeding, by extra stimulation through manual expression or the use of a breast pump, and by correcting any disturbing factors in the home environment, such as diet, fatigue, worry, nervousness, over-anxiety.

Unquestionably the most efficient form of stimulation of the breast, either for restitution of or increase in the supply of milk, is complete evacuation through vigorous sucking by the child. Practically every normal baby can be taught how to nurse vigorously, but the premature, feeble infant, the indolent and unwell baby, the abnormal and inadequately stimulated breast, the sensitive nipple, present a problem necessitating mechanical means to secure proper stimulation and keep the breasts active. Various mechanical means are available for manual expression by different types of pumps such as the Deval, the U. S., the Taeterle, the English, and the electric. Manual expression intelligently used is probably the most effective. Force is unnecessary and is to be condemned; it is painful and favors mastitis from the trauma inflicted or a galactocoele from rupture of a milk duct. The best technique simulates that used in milking a cow. The breast is grasped with the thumb and forefinger just outside the areola with first deep, firm pressure backward, followed by compression of the breast between the fingers. Stripping downward is not necessary. If grasped farther back this hinders the process. It requires time, perseverance, and encouragement, but



the results are worth the effort. Some mothers cannot acquire the knack of manual expression or are unwilling or unable to devote the necessary time, in which case the electric pump or a modification of its principle are great assets. Other pumps are not effective.

Two very common errors and problems are underfeeding and overfeeding the baby. Too often the supposition arises that the milk disagrees with the child and weaning is resorted to. Underfeeding is based on an insufficient quantity or an abnormal quality of the breast milk and is due not to an idiosyncrasy to mother's milk, but often to improper nursing habits, to malformation and disease of the nipples, to difficult yield, to inadequate breast tissue, to fatigue, poor general health, nervous phenomena, or faulty habits and hygiene on the part of the mother or baby. Such a condition is corrected by measures designed to offset any or all of these factors—more complete stimulation of the breast, nursing of both breasts, discarding by stripping a portion of the first milk where there is an overabundance present, manual expression or complementary feeding, but not by weaning.

Overfeeding arises from too frequent, irregular or too prolonged nursing habits or an overabundance of food. The food should be reduced to the required amounts by establishing proper nursing habits and intervals; one breast if both have been used; shorter duration of feeding; short nursing period on both breasts with stripping to completely empty the breast and avoid the high per cent of fat obtained in the "last" milk; checking the speed of nursing; or diluting the milk by giving the child a small amount of water immediately before nursing.

The mother's life should be well ordered, with some simple recreation, and with ample rest and freedom from worry, emotion and nervous strain. Her diet should consist of an abundance of wholesome, digestible and nourishing foods taken regularly with a little extra fluid, such as water, tea, milk, broth and thin soups taken with the meal. A moderately increased amount is necessary to provide for the increased demand and to save her reserve store of food and energy, but it is a grave mistake to give large quantities of gruels, malted milk, chocolate, ice cream, either with or between meals, as they encourage digestive disturbances and overweight, without increasing materially the quantity or quality of the milk. Some children may very early show an idiosyncrasy to certain foods, such as eggs and fat, and in such circumstances these particular articles of food should be eliminated from the mother's diet. Proper milk can be produced only on proper food and by a well mother. Vitamins and minerals are essential and are obtainable through proper diet—milk, fats, green vegetables, fruits; but even so, there may be a deficiency in the mother's milk, especially of the antiscorbutic vitamin C. This should be given to the child early, six weeks to two months, in the form of orange juice or cabbage juice.

The duration of breast feedings depends on various factors. All things considered, a good rule is to continue nursing for six to nine months with sufficient supplemental feedings to permit of change

and rest for the mother. Weaning should be accomplished as a gradual process over a long period by gradually adding foods to the baby's diet with the number of nursings lessened. A gradual discontinuance of breast stimulation requires no special care of the breast and avoids engorgement, pain and the danger of mastitis experienced in attempts at sudden weaning. Where this is necessary, however, the breast should be well supported and firmly bound against the chest wall; the fluid intake should be reduced to a minimum; the tissue fluids should be further reduced by a saline cathartic daily, and ice bags applied to relieve the congestion. In the event of great discomfort, a hot compress may be applied for a few minutes and the breast relieved by manual expression or by pumping.

Night feedings should be discontinued as soon as possible. Many babies will correct this habit voluntarily within a few weeks, while others will need to be trained. This may be done any time after the first month if the baby is robust and is gaining well. It will react greatly to the benefit of the mother who needs her rest and works no hardship upon the infant.

Prenatal and postnatal care of the breast is a most important detail and may determine failure or success of breast feeding. This care consists in efforts directed to soften, toughen and develop the nipple for, and protect it from, the strain of nursing. Such attention should begin about four to six weeks before term. Simple cleansing of the nipple and areola once daily with mild castile soap to remove any dirt, secretion and cornified epithelium is recommended. This is followed by gentle massage of the same areas with KY lubricating jelly or a similar preparation. Gentle traction is made on the short or retracted nipple. The breast, especially if heavy and pendulous, should be supported without pressure or constriction. The application of hardening and astringent preparations or the use of force and roughness in traction defeats the purpose and invites fissuring, blisters, ulceration and painful nipples with their attendant evils.

The nipple and areola should be cleansed both before and after nursing with sterile water and covered with a clean or sterile gauze between nursing. This tends to prevent infection of the secretions and of any fissures and blisters. In spite of every care, a mild degree of sore nipples on the basis of erosions, fissures, blisters or ulceration is a frequent complication, especially in primipara and blonds during the first weeks of nursing. The attendant discomfort interferes with lactation and with nursing to the detriment of the child and subjects the mother to the risk of mastitis and abscess formation. This condition is especially common in the presence of inverted, flat or deformed nipples, and prolonged efforts at nursing should be avoided.

The treatment of sore nipples begins with prophylaxis. Simple exposure of a sensitive nipple to the air for two hours twice a day or bathing with cold water will often remove the trouble. Any of the complications above referred to call for rest and strict cleanliness. Lead nipple shields should be worn between nursings for protection as well as for any

supposed healing properties. The alternate use of compound tincture of benzoin which hardens and stimulates healing and of a soft nipple cream is helpful. I advise a cream which has as its base a vegetable gelatine, combined with glycerine, water, phenol, calamine and zinc oxide. Two to five per cent silver nitrate solution applied twice daily, or an alcohol or boric compress applied for thirty minutes once daily, are very effective in fissures and ulcers. The nipple should not be nursed directly, but is protected with a glass shield or the electric pump is used, the breast being stripped to ensure complete emptying. Complete suspension of lactation for a time may be necessary to promote healing and prevent mastitis and abscess formation.

In spite of every care, mastitis is an occasional complication. Seventy-five per cent of infected breasts occur during the first month while the breast is unused to its new function and when faulty habits of nursing and care are used with unnecessary trauma and neglect. The infection enters either by the lymphatic channels or the milk ducts or through the blood stream, bacteria from a focus elsewhere in the body lodging in an area of stagnation or lowered resistance or lodging in the breast tissue in the process of excretion. Most authorities favor the lymph channel route and feel that the pathological changes are always largely in the interlobular stroma and not in the parenchyma of the gland, so that the milk is rarely contaminated. Others state that the milk of an infected breast is itself infected in 86 per cent of the cases, and offer the following quite feasible explanation: A breast traumatized by nursing, stripping and pumping and rendered inactive because of a fissured or ulcerated nipple becomes engorged. Infecting organisms introduced from without multiply in the milk and serum about the fissure and thence pass into the breast along the milk ducts with absorption occurring by the lymphatics. One lobe is infected first and it then spreads along the incomplete interlobular septa. Circumstances must determine the advisability of continuing nursing in the presence of mastitis. In most mothers the breast should be emptied only as occasion demands to avoid generalized or local engorgement which carries an increased danger of spread of the infection, especially in the presence of roughness. In any instance, mastitis may be aborted by rest, support for the breast and the use of the ice bag with the first appearance of deep tenderness and deep pain on nursing, especially with an associated temperature rise, or with the development of a red line of lymphangitis or of a beginning inflammatory induration in the breast. If the condition progresses, moist or dry heat should be used to promote the development of abscess formation which is then dealt with by radiating incision and drainage.

The reasons advanced as contraindication to nursing cover a variety of conditions, many of which will not stand the test of good judgment. Among these are tuberculosis, pregnancy, menstruation, acute infections, nephritis, eclampsia, post partum hemorrhage, abnormal or diseased breasts and nipples, gastric and intestinal disturbances in the baby,

abnormal milk. In general, most of these conditions are of relative importance and depend upon the severity of the particular lesion, the general physical condition of the mother and other circumstances. Menstruation and the advent of pregnancy do not as a rule alter materially the composition of the milk and any disturbing influence on the child is temporary and insignificant, being brought about by disturbed metabolism, psychic influences and habits and methods of nursing. They offer no foundation for discontinuance of breast feeding. Gastric and intestinal disturbances and abnormal milk rarely offer an indication for artificial feeding but demand rather carefully supervised breast feeding. Abnormal and diseased breasts and nipples must be dealt with on their merits. Tuberculosis, toxemia, severe anemia present no difficulty of decision.

It is difficult often to distinguish between the benign tumors of the breast and the malignancies, but too many physicians are assuming a radical attitude toward every pathological lesion in the breast and are advising extensive and mutilating surgery. While it is true that all so-called benign tumors are potentially malignant, still I want to sound a warning against this extreme view. In my opinion, intelligent conservatism should be used. The simple fibro-adenoma, the adenofibroma, the simple cyst and cystic adenoma should be excised and the breast kept under observation from time to time. Every such tumor removed should be subjected to a careful microscopic study for diagnosis. Large, rapidly growing tumors, multiple cysts or tumor conditions in which a large area of the breast is involved should be subjected to removal of the entire gland and if necessary a complete operation because of their tendency to become malignant.

I want to call attention, too, to the frequency of mammary cancer in the presence of "chronic mastitis and of breast stasis and the resulting irritation that follows the retention of stagnating secretions of the breast" as pointed out recently by Adair and Bagg in a study of two hundred cases of mammary cancer. Breast stasis may result from failure to nurse a child, from miscarriages, from a rapid succession of childbirths, from non-establishment of the breast function, from stenosis of milk ducts in inverted or malformed nipples, from poorly drained outlying portions of the breast, from traumatic obstruction to drainage, etc. With poor drainage, the breast secretions stagnate and act as a chemical stimulant and irritant within the organ.

So-called chronic interstitial mastitis presents a rather indefinite lumpy feeling of deep induration or thickening and a shotty nodular character due to cyst formation. This is felt only on picking the breast up between the fingers. Auxiliary glands are often slightly enlarged. There is usually pain, varying from slight uneasiness to a dull, neuralgic aching or boring, stabbing pain, worse at night. This condition is an almost constant concomitant of carcinoma, but it is impossible to say that it is a universal precursor of this condition. It is not an inflammatory condition, but rather a perversion of the normal involution which takes place in the breast about middle age. As such it inflicts upon the breast



chronic irritation which disposes the already actively proliferating cells to further abnormal change and possible malignancy. Mild cases may be treated by rest, support and potassium iodid. In the more severe or suspicious cases with lumpiness, nodule formation, excessive induration, and enlarged axillary glands the mass should be removed and subjected to a painstaking macroscopic and microscopic study.

## THE DIAGNOSIS OF CHRONIC AMEBIASIS

By WILSON T. DAVIDSON

*Many cases of chronic amebiasis are undiagnosed.*

*Amebic infection is protean in its manifestations.*

*Systematic and thorough stool examinations should be made of (a) all patients from the tropics and subtropical zones; (b) all cases of chronic gastro-intestinal disturbance of whatever nature, and (c) all patients suffering from chronic invalidism, either with or without a previous history of gastro-intestinal upsets, who present the clinical picture of anemia, a slight icterus, pasty complexion, loss of weight, and various disturbances of the nervous system.*

DISCUSSION by Philip K. Gilman, San Francisco; Herbert Gunn, San Francisco.

SINCE the World War the attention of the medical profession has been sharply focused upon the widespread existence of amebic infection. Previous to that time the average physician practicing in the United States looked upon this disease as belonging almost exclusively to the tropical zones, with an occasional case in the subtropical regions. But recent studies upon soldiers returning from the World War, both in England and the United States, show an average infection of approximately 9 per cent; and of about half that percentage in soldiers who had never been out of either country.

We have good reason for believing that the incidence of infection in California is somewhat higher than that of the rest of the United States; for, while California had her due proportion of soldiers in the war, and undoubtedly the usual average of chronically infected persons returned to her borders, there is also a constant introduction of more or less chronically infected persons on account of our proximity to Mexico, and our enormous sea coast, receiving passengers from all parts of the world, further exposes our citizens.

And it is just such chronically infected persons who transmit the infection to other individuals who have never been out of the state. This is especially true of so-called "carriers" who may not be very cleanly in their habits, particularly in communities where modern sanitary regulations are not adequately enforced. Some of these invalids present symptoms so varied that the nature of their malady has never been determined.

The still too prevalent conception of a typical case of amebiasis, or so-called "amebic dysentery" is that of a person actually ill, with ten to twenty bloody mucous stools daily, tormina, and tenesmus. Similar symptoms, with slight variations, would apply to any of the several other forms of acute dysentery. The differentiation between types can only be made by an examination of the stools as to their cellular contents and the recognition of the causative agents.

Clinically chronic amebiasis may be divided into:

**Mild Cases**—These are individuals who have incurred a true infection of the colon with *Entameba histolytica*, with varying degrees of ulceration, and a constant throwing off of cysts. While the patient does not complain of illness, there are certain minor symptoms to which little or no attention may have been given, such as short spells of looseness of the bowels, vague abdominal pains, and slight nausea at times. Careful questioning may be required to bring these symptoms out or the diagnosis may only be made when the patients become acutely ill from some error in diet, intercurrent disease, or other more or less severe disturbance of the physiological balance. It is also known that frequent cases of hepatitis and hepatic abscess have followed these mild ulcerations, thus indicating that the *entamoeba* causing them is as truly virulent as that found in severe cases of amebic colitis.

**Moderate or Severe Type**—This includes the vast majority of amebiasis, and they are patients who should be given close attention. The history usually reveals attacks of "dysentery" some years ago, often while the patient was resident in some tropical or subtropical country, but occasionally also in persons who have not been out of the United States. The patient usually tells of taking treatment and getting so much better that for a time he considered himself well on the road to recovery, until a month or six weeks later, when he had an acute exacerbation with symptoms similar to those of the first attack; that he again took a course of medicine, and seemed to improve slightly, when suddenly, after eating an unusually hearty meal, or some disturbing article of diet, the symptoms again returned. A number of these spells may have taken place from one to six months apart; or he may not have had any acute intestinal symptoms for a period of years; again, there may have been a slight looseness of the bowels at all times, or at irregular intervals; or there may have been marked constipation for a long time; or constipation alternating with moderate diarrhea. In brief, any combination of symptoms of diarrhea and constipation.

Upon physical examination the patient is found decidedly below normal weight, there is considerable loss of strength, and possibly a slight icterus; he is anemic, has a variable appetite, and usually some difficulty in sleeping. On palpation, the colon may show one or two points of tenderness. A fresh stool may reveal at once the cyst of the *Entameba histolytica*. If there is a moderate looseness of the bowels or diarrhea, the vegetative form of ameba may be found. Or the first specimen may prove negative, and the cyst be found upon the second or third or some subsequent examination. All these proving negative, the patient is given a big dose of salts, and one of the stools examined while warm. In the vast majority of cases either cysts or active amebas are then found. However, one should not rest satisfied until he has put the patient through a series of warm stool examinations following doses of magnesium sulphate.

Such cases as I have described, or, in fact, any case of chronic amebiasis that has had recently a course of specific treatment, will require special at-

tention to arrive at a diagnosis. Due to the medication the specific organism may not be readily found, and the patient may appear to be suffering only from its secondary effects. A prolonged series of stool examinations may be necessary in these cases. And even if only a few cysts of the histolytica are ultimately found, this will disclose the fact that the patient still harbors an infection in the colon.

*Atypical Cases*—I have attempted, in the description just given, to present as clear a picture as possible of the usual chronic amebia colitis. However, at frequent intervals we run across patients who present an entirely different train of symptoms, as illustrated in the following case histories.

1. Patient, age 59. Complaint: Pain in right upper quadrant. Twenty-five years' residence in the tropics; no previous gastro-intestinal trouble. Patient has been gradually losing strength, suffered from insomnia for several years, and recently a dull, heavy pain was first noticed, and has continued at irregular intervals in the upper right quadrant, over the hepatic flexure. Skin markedly icteric, complexion pasty, appetite fair, bowels regular. An area of slight tenderness over hepatic flexure. Stools apparently normal and well formed.

Three cold stools were negative. A warm liquid stool, following a large dose of magnesium sulphate, revealed small cysts, apparently histolytica, but few in number. Another specimen contained cysts, which upon staining proved to be histolytica, the same race as those found in the preceding specimen. In another similar stool two days later motile amebas were found.

2. Patient, age 29. Complaint: Nausea. Previous history unimportant, except for a tour of duty of two years in the Philippines, which had terminated four months previously. Nausea first noticed three months ago, and of late is getting worse; has vomited a few times recently following meals. There is slight icterus, a rather pasty complexion, moderate anemia, and he is twenty pounds underweight. Physical examination of abdomen negative, except for slight enlargement of liver, some tenderness upon pressure over region of appendix. An operation was advised, at which the appendix was removed, gall-bladder found apparently normal. Following operation the nausea disappeared for some days, when suddenly it returned with diarrhea. Specimens contained motile forms of the *Entameba histolytica*.

Subsequently, specific treatment was given with an entire relief of all symptoms and a return to normal in the size of the liver. It is quite likely this patient had a chronic colitis with an acute exacerbation and a hepatitis, both due to the *Entameba histolytica*.

3. Another patient from the tropics, age 32, the details of whose symptoms will be omitted, further than a general nervous irritability, which proved to be an amebic colitis.

*Appendicitis*—Favorite sites for the implantation of the ameba in the mucous membrane of the colon are those at which stasis takes place. Such, for instance, as the cecum, various flexures and the rectum. A migration into the lumen of the appendix is just what we should expect, and it actually takes place. Cases are reported in which the outstanding symptoms are those of an involvement of the appendix. These patients may have had treatment which has rid them of the parasite in the colon, the specific medication failing to reach an infection in the appendix. Such a focus may be a constant source for reinfection.

*Migrations or Metastases*—The *Entameba his-*

*tolytica* in its vegetative form is in its normal habitat only in the wall of the colon; all primary implantations take place here, with the exception of a few cases in the small bowel. During the process of ulceration in untreated patients, small vessels of the mesentery are readily involved, and these frequently carry the parasite to the liver, where it forms additional areas of involvement. These, in turn, either through direct extension or by means of the circulation, sometimes cause additional foci in the lungs; and from the lungs, in extremely rare instances, abscess of the brain or spleen occurs. It is extremely doubtful that an infection ever takes place in the lungs independent of a prior one in the liver; however, the involvement in the latter organ may have been so mild as to escape attention. And, furthermore, I consider that any infection in any other organ in the body has had its origin by metastasis from the colon.

The symptoms from the involvement of the colon may have been of so slight and ephemeral a nature as to escape the notice of the patient. Thus we see that patients, particularly those from the tropics who complain of symptoms referable to the liver, or of what may be thought to be an abscess of the lung or brain, may have the true nature of their infection disclosed by the discovery of the ameba in the stools.

There are frequent instances of an involvement of the peritoneum, and rarely post-colonic and perinephritic involvement, due to the direct migration of the entameba; and Craig reports a case of a fistula thus formed between the rectum and the bladder.

More recently other organs have been reported as having been infected, either independently or coincident with an involvement of the colon. Thus we have the entameba given as the causative agent in bronchitis, Hodgkins' disease, abscesses in the muscles, and in the bone marrow or joints, causing an arthritis.

It was declared that the specific organism was found in all these cases, and many of them are reported as yielding to treatment. Such reports as these are becoming more frequent. Indeed, amebic bronchitis seems to be quite common in Egypt.

#### DISCUSSION

PHILIP K. GILMAN, M.D. (350 Post Street, San Francisco)—In spite of the frequent mention in medical literature of the subject of amebic infection, the lesson intended has not yet been learned. Too often, still, is the role played by the *Entameba histolytica* disregarded and one or more of its resultant manifold symptoms neglected. At least for this reason is Doctor Davidson's brief outline concerning the diagnosis of chronic amebiasis timely.

As is stated, the majority of physicians have so long associated the terms "ameba" and "dysentery" that, unless the sufferer manifests numerous bloody stools, this particular parasite is not considered. Constipation was present in more than half of the cases of amebiasis seen by us during the past five years.

Amebiasis occurs practically in all parts of the United States; in California it is apparently on the increase. Its symptoms may be so very indefinite that only by the most painstaking search may the cause be detected. No patient presenting indefinite symptoms referable to the abdomen should be subjected to an operation until infection with *Entameba histolytica* has been excluded.

Davidson groups his cases into those of mild severity, moderate, or severe and atypical. Here in California the



larger number of patients suffering from chronic amebiasis belong to the last subdivision—the atypical.

HERBERT GUNN, M. D. (350 Post Street, San Francisco)—Just as Dr. Davidson says, since the war the attention of the medical profession has been focused on the subject of amebiasis, and the fact that now many more physicians are on the lookout for it accounts, I believe, largely for the apparent increase noted in its incidence.

That still many medical men require to have the subject drawn to their attention is evidenced by the frequency with which the disease is overlooked—either not thought of at all or sought for by unsuitable methods and overlooked.

At the present time I have under observation two patients who, not being relieved of symptoms by appendectomies, were investigated for amebic infection and found positive.

Routine examination of the stools in such cases, as advocated by Davidson, would practically make impossible such gross errors.

## EVOLUTION OF THE SURGEON FROM THE GENERAL PRACTITIONER †

By A. S. MUSANTE \*

(From the Division of Surgery, St. Joseph's Hospital,  
San Francisco)

IT IS my purpose to briefly discuss the manner by which a doctor ambitious to do surgery can, with profit, first spend a preliminary period in general practice, rather than to plunge, immediately after graduation, into specialized operative work or post-graduate surgical study. If it can be shown that five, ten, or more years of general practice in medicine and surgery and, after that, specialized post-graduate surgical study is the proper preparation for prospective operators, it will be very satisfying. If it should be evident that a surgeon without preliminary general practice, but with only a year's post-graduate study or less is apt to fall short in diagnosing and treating many complaints apparently within his field, because the patient's abnormality in its entirety is not thoroughly comprehended, it will establish the conviction aimed at.

### HOSPITAL SHOULD PREVENT IMPROPER OPERATIONS

The question of whether a surgeon is doing proper work or, instead, is performing useless operations or raising the mortality rates is of much importance nowadays to those who are in charge of hospitals, as the American College of Surgeons and American Medical Association make it the duty of the hospitals, among other things, to review the work of the doctors so as to prevent avoidable operations and deaths. Instances of certain doctors being denied the privilege of practicing in hospitals, because of their incompetency or unscrupulousness, have been brought to our attention and courts have upheld those who sought to prevent unnecessary or

poorly performed operations. In fact, the time has passed, with the progress of our institutions, when in worthy hospitals patients are at the mercy of incompetent or dishonest doctors, those in charge of these hospitals having risen to the high and noble plane of feeling responsible for the proper care of the sick and injured coming under their charge.

### SURGICAL COMPLAINT OFTEN DECEIVING

May I recite an instance which impressed me with the advantage that would redound to a surgeon and his patients if five or ten years of general practice were engaged in by those who wish to be surgical operators? A woman, 32 years of age, was brought to me about ten years ago with a history of having been operated upon for bleeding piles by a prominent surgeon one year before. The piles had returned and the same surgeon desired to operate again, but the patient was not willing. It was not difficult to discover that her present and previous piles were due to a well-developed case of cirrhosis of the liver. Regulation of this woman's diet corrected her hemorrhoids, although the liver condition very rapidly caused her death. If the surgeon she consulted at the time she first complained of piles had made a correct diagnosis he would not have operated upon her for piles, but may have done a Talma operation for the cirrhosis which might have helped her very much. When I saw her, the liver condition was too advanced and rapid for any such procedure, and she died after six months.

### GENERAL PRACTICE A GOOD SURGICAL PRELIMINARY

A surgeon without a wide foundation of general practice cannot build his surgical career as solidly as if he had a long, broad experience in general medicine. It is true that every surgeon has had a course in college covering all the maladies "that flesh is heir to," but no deep-thinking person would claim that this is enough to diagnose and treat correctly all that had been studied, unless it is followed by practical experience in handling repeatedly the different diseases. As a matter of fact, every doctor—whether specialist or general physician—should have a sound knowledge of the entire field of medicine and surgery, so that if called upon, especially in an emergency, he will by his conduct reflect credit upon our profession which he upon such occasion represents. He would not be guilty of the conduct of a certain specialist who, while on his vacation, was asked to see a teacher who had fainted. Finding her prostrate and unconscious, this doctor declared he was a specialist and knew nothing about what ailed the patient and left her. The next physician called found that the bystanders had done what should have been ordered by the specialist. The most difficult problem of the second doctor was to deal with the adverse criticism that was being heaped upon the previous doctor.

One who precedes his surgical work with general practice as a rule has a good deal of experience with surgical consultants and operators, whom he assists many times, and this contact will not only be valuable from a teaching standpoint, but it will enable him to discover if he is fit for the trying situations

† Read before the Catholic Hospital Association, September 23, 1925.

\* Attilio S. Musante (916 Kearny Street, San Francisco), M. D. Cooper Medical College, 1907. Practice: General and major work in Surgery. Hospital connections: St. Joseph's Hospital, San Francisco. Appointments: President St. Joseph's Hospital Staff. Publications: "Medico-Pharmaceutical Ethics" (Journal A. M. A. and Practical Druggist); "Physicians' Aspect of Alternate Sunday Closing of Pharmacies" (California State Journal of Medicine); "Co-operation of Non-Catholics" (Proceedings of Catholic Hospital Association).

of the surgery. We all know of persons who, instead of stepping from general practice to a specialty, have reversed matters and given up specialized work to take up the labors of the general practitioner.

The new M. D. who, with or without post-graduate surgical study, attempts surgical specialization, is apt to find it more difficult to develop a successful practice in his specialty than the one who has found in his years of general practice that he is being consulted for surgical conditions more and more, becoming quite capable to decide which cases need operation—the most important qualification of a surgeon—and follow them through and after operation, learning his technique at the operating-table and soon finding himself competent to handle most of his patients alone. He now becomes what many allude to—often contemptuously—as the “occasional operator,” meaning that he does general work but operates upon patients whom he feels he can do as well by as the men he was in the habit of calling in to help him. For him post-graduate study in surgery, when undertaken, will be built upon a broad medical experience.

#### ECONOMICAL ADVANTAGE OF PLAN

Economically, the new doctor who starts out to do surgery, even although he has learned a great deal of technique during the operative assistance he has rendered in his intern year, finds that he is called in mainly for children's and old peoples' maladies at first, and when he does get a chance to operate his knowledge and courage, manifested for operations at the end of his hospital service, fail him and he does best if he calls in an experienced surgeon to assist him. He is apt to encounter financial difficulties also if he does not take up general work, as his chances for adequate fees are small indeed. If he starts general practice soon after his graduation, he is more likely to immediately begin to do something, while if he continues with post-graduate study he adds more expense to the costly medical course he has just ended. Do not construe the above as being against either post-graduate study or specialization, as both are highly necessary for the advancement of medicine and surgery. The only question is: Should they be preceded by a practical medical general foundation or not?

#### YOUNG GRADUATE AS FAMILY PHYSICIAN

A period of years in general practice will tend to meet the growing shortage of that noble character and pioneer in our modern history, the family physician, whose passing is bemoaned by many prominent medical and lay leaders. Families in the city and country want the general practitioner, to whom they may go with all their ailments and, while it may be well that the old, overworked family physician is not as common as before, it will always be desirable to keep up the custom of having doctors—preferably young, active ones—who will be in a position to serve as general medical advisers, calling in specialists whenever needed. And who better than the recent graduate, with the progress of medicine just reviewed, can serve in this capacity with profit to his patients and himself?

## THE CONSERVATIVE TREATMENT OF ECLAMPSIA

By MARGARET SCHULZE \*

*Prenatal care is a most important factor in the elimination of eclampsia. A well-controlled service will show far fewer cases, and these of milder type than an emergency service.*

*Pre-eclamptic toxemia should receive immediate and carefully controlled medical treatment in a hospital, and unless the condition subsides promptly, the pregnancy should be terminated, either by induction of labor or in carefully selected cases by Caesarean section.*

*In the treatment of eclampsia itself, radical operative measures, as Caesarean section and accouchement force, add very materially to the maternal risk, both in mild and severe cases. Mild cases do comparatively well under any type of treatment, yet even here the risk is doubled by radical intervention, while the chance for recovery of a severe case is very markedly decreased by the trauma of an operative intervention. Reliance should, therefore, be placed on morphin and eliminative measures, and no attempts at delivery should be made until the cervix is dilated. The value of venesection is not fully established, since Lichtenstein, Williams, and others report excellent results from its use, while the British Commission found a higher mortality in cases where it had been employed.*

*The interest of the child cannot be argued in favor of radical intervention, since its chances depend first, on its maturity; second, on the severity of the toxemia, and only very slightly on the method of delivery.*

*Cases of eclampsia which show no sign of the onset of labor during the course of conservative treatment should have labor induced, since this does not add to the maternal risk, while death of the fetus or continuance of the maternal toxemia is the rule in this type of patient.*

*DISCUSSION by P. O. Sundin, Los Angeles; H. J. Ring, Ferndale; Harry S. Fist, Los Angeles; E. N. Ewer, Oakland.*

SINCE eclampsia is one of the most serious complications with which the obstetrician has to deal, its treatment becomes a matter of the greatest practical interest. In spite of most extensive investigation, its etiology remains unknown and its treatment, therefore, at present empirical.

With the development of the toxemia theory of the disease, it seemed entirely logical that the best way to treat a toxemia occurring only in the pregnant state was the most rapid possible termination of the pregnancy. Accordingly, radical operative delivery by Caesarean section, first recommended by Dührssen in 1891, or by vaginal hysterotomy or accouchement force, came to be so generally accepted that, in spite of extremely bad results, any recommendation of greater conservatism met with very little favor. Stroganoff's first report at the Paris Congress of 1900 of ninety-nine cases with a mortality of 5 per cent, in spite of the excellence of the results, made comparatively little impression, and it was only after he had personally demonstrated his method in a number of clinics that it began to be accepted there. Conservative treatment, with the emphasis on eliminative measures, has been practiced at the Rotunda Hospital in Dublin since 1903 with a mortality varying from 8 to 12 per cent, yet was almost unknown in other parts

\* Margaret Schulze (University of California Hospital, San Francisco). M. D. University of California. Practice limited to Obstetrics and Gynecology. Hospital connections: San Francisco and University of California Hospitals. Appointments Pathologist ((Obstetrics and Gynecology) San Francisco and University of California Hospitals; Instructor in Obstetrics and Gynecology, University of California.



of Great Britain. Lichtenstein, noting that apparently those cases did best which had lost considerable blood at the time of delivery, recommended free venesection without operative intervention, and in 1913 reported ninety-four cases so treated, with a maternal mortality of 5.3 per cent.

Gradually the excellence of these results began to make their impression, and with the recognition that the most diverse types of non-operative treatment yielded almost comparable results, the idea gained ground that the trauma of operative delivery must be an important factor in maternal mortality. In the past ten years conservative treatment has come into rapidly increasing vogue, and with it reports of marked decrease in mortality. McPherson states that, under reasonably conservative treatment, the mortality at Sloane was reduced from 28.3 to 14.5 per cent. His own results at the New York Lying-In Hospital showed a corrected mortality of 9 per cent in a series of fifty-five cases. The London Committee of the British Congress of Obstetrics and Gynecology in an analysis of 425 cases reports a mortality of 5.2 per cent in mild cases treated conservatively, with 9.8 per cent in those treated by Caesarean section, while the results in severe cases were 26.3 per cent and 43.2 per cent, respectively. Wilson, from the Johns Hopkins Service, reports a reduction from 14.2 to 2.3 per cent in mild cases and from 38.8 to 19.4 per cent in severe cases, with the adoption of conservative methods in a total of 247 cases. Numerous reports from smaller services show similar improvement in results.

With these points in mind, I have analyzed the treatment and results of fifty cases of eclampsia observed in the University of California service.

Although this series is too small to permit of final conclusions regarding the comparative value of various types of therapy, it brings out a number of points of much interest. The first of these is the comparative rarity of the disease in San Francisco. The second, the marked difference in frequency and severity of type of the disease encountered in two services in the same community. Thirty of these cases occurred in a series of 6000 obstetric cases, delivered in the University of California obstetric service during a period of sixteen years, an incidence of one case in 200. Twenty occurred in a series of approximately 2700 cases in the San Francisco Hospital service in the past five years, an incidence of one case in 135.

We now classify the cases into mild and severe according to the criteria established by Eden, in which the presence of more than one of the following phenomena justifies classification as a severe case: (a) coma; (b) pulse rate over 120; (c) temperature over 103 degrees; (d) a number of fits greater than ten; (e) a urine which becomes solid on boiling; (f) a blood pressure over 200. Of the thirty University of California cases, only five, or one-sixth, could be classified as severe, and of these one died, a mortality of 3.3 per cent for the total series, or of 20 per cent for the severe cases. Of the twenty San Francisco Hospital cases, ten, or one-half the total number, were of the severe type, and of these, two were practically moribund on ad-

mission, and a number of those classified as "mild" showed one of the danger signs noted above. Of this series, five died, a mortality of 25 per cent for the total series, and of 50 per cent for the severe cases. Since the line of treatment followed has been practically the same in the two institutions, the wide discrepancy in results can be explained only on the basis of difference in severity of the disease. Further, it must not be overlooked that both series are so small that even one fatal case will markedly influence the results, and inclusion of the two moribund cases, which would undoubtedly have died under any method of treatment, almost doubles the mortality rate for the San Francisco Hospital.

Seeking now for the cause of this remarkable difference in frequency and severity of eclampsia in these two institutions, we find that the essential difference is the fact that the University of California service has had, almost since its inception, a well regulated prenatal clinic through which nearly every patient delivered in the hospital passes. The prenatal clinic at the San Francisco Hospital is a more recent development; and patients still apply to this hospital through the emergency service. A large proportion of patients, therefore, are not seen until they are in labor or have developed some serious complication of pregnancy. Only two of the cases classified as "severe" in this series were seen before the onset of convulsions, and both of these entered with a severe pre-eclamptic toxemia. These observations serve to further emphasize the generally conceded point that the treatment of eclampsia is largely prophylactic, and that in a service with properly regulated prenatal clinic, the incidence of the true convulsive toxemia is rare, and the type of case usually mild.

A consideration of the results of treatment in this series is confused by the fact that no one definite routine was followed for any large number of cases, but treatment was markedly individualized, yet the series is too small to allow of adequate comparisons between different methods followed. Nevertheless, an attempt will be made to form as fair an estimate as possible.

Of cases treated conservatively—that is, without attempt at immediate delivery—there are thirty-one. Two of these died undelivered, the moribund cases mentioned previously. Nine were delivered spontaneously, without deaths. Eleven were assisted deliveries, that is, low or mid forceps, or breech extraction after complete dilatation of the cervix had occurred, also without deaths. In six, labor was induced by bag in the pre-eclamptic stage. In three of these convulsions developed during the course of the labor, in the other three, postpartum. The first case was of severe type, yet the patient recovered from her toxemic manifestations, only to succumb on the twenty-second day from streptococcus pneumonia and meningitis. In three patients, labor was induced by bag during an antepartum eclampsia, all of them recovering. The total mortality for this series, then, is 9.6 per cent. Classified into mild and severe, gives twenty-six mild cases, without mortality. Of the five patients with severe eclampsia, two were moribund and would undoubtedly have died under any method of treatment, one

recovered from her eclampsia only to die of infection, while the other two recovered. It would seem, therefore, that conservative treatment gives entirely satisfactory results in the mild type of case, but has not had a fair or adequate trial in the severe type in this series.

Radical measures for immediate delivery were instituted in nineteen cases; accouchement force was applied in fourteen; and Caesarean section in five. Accouchement force has not been attended by the disastrous results ascribed to it by Eden, Williams, and others. Of the fourteen patients, only one died, a total mortality of 7.1 per cent. Of eight mild cases, all recovered. Of six serious ones, one died within twenty-four hours of delivery of continued toxemia, a mortality of 16.6 per cent.

The results in the small group of Caesarean sections in this series were even worse than those generally reported. Of five patients, two died, a mortality of 40 per cent. One mild case recovered, two of four severe cases died, one within twenty-four hours, of continued toxemia, the other five days postpartum of post-operative pneumonia; a mortality of 50 per cent for the severe cases.

A consideration of the factors in fetal mortality is of importance, since the interest of the child is often argued in favor of radical intervention, particularly Caesarean section. Wilson reports practically identical percentages of fetal mortality, 110 treated radically, and 137 conservatively. The total mortality in this series, including still-births and neonatal deaths, was 21, or 42 per cent. The most important factor in fetal mortality was found to be prematurity, since of 19 patients delivered before the eighth month, 15 died, or 79 per cent; of 31 delivered after the eighth month, only 6 died, or 19 per cent. Severity of the maternal toxemia was also a very important factor, since of 15 severe eclampsias, 9 babies died, a mortality of 60 per cent, while of 35 mild cases, 12 babies died, or 34 per cent. The type of delivery seems of secondary importance, since Caesarean section shows 40 per cent mortality, practically the same as the total average. Natural delivery gives 56 per cent; accouchement force, usually accredited with a very high fetal death rate, gives 57 per cent, while in thirteen instances of assisted delivery there was no fetal mortality; these, however, were practically all at term, only one was before the eighth month, and only two were severe toxemias.

A consideration of the cases of intercurrent eclampsia is of interest. Lichtenstein, in 1911, directed attention to the fact that labor does not always supervene in eclampsia, but that the woman may recover from the attack and give birth to a dead fetus some time later, or even go on to term and bear a living child. Our series shows four cases in which delivery was delayed for several days. Three patients were delivered of macerated fetuses from three to six days after the acute attack; one patient had a living child two days later. Although convulsions had ceased and the more acute symptoms had subsided, in none of these patients had blood pressure or urinary findings returned to normal, and in two of the first three labor was induced because of increasing evidence of pathological

manifestations in these findings. From a consideration of these cases, and others reported in the literature, and the fact that bag induction of labor does not add to the mother's risk, as shown in a considerable series (eighty-three) by the London committee, we feel that patients showing no tendency to go into labor spontaneously should have labor induced, both with the view of preventing fetal mortality and possible permanent damage to the mother from continued toxemia.

Estimation of the comparative value of different medical measures in this series is most difficult, since most patients received several, and no uniform routine was adopted. Morphine to control convulsions was used in the great majority, and was combined with eliminative measures, gastric and colonic lavage, and croton oil, castor oil or magnesium sulphate, in most. Chloral and chloroform were used but rarely and in the early cases. Venesection was comparatively rarely employed, almost always in patients with marked hypertension and in only a few in the large amounts recommended by its enthusiastic advocates. Hot packs were used in the early cases, but have been abandoned. Fluids by rectum, or hypodermoclysis, were used in many. Intravenous glucose, sometimes given with insulin, has been used sometimes recently. Various other measures were employed in scattered cases, but morphine and elimination were the mainstay in the majority.

#### DISCUSSION

P. O. SUNDIN, M. D. (H. W. Hellman Building, Los Angeles)—The conservative treatment of eclampsia is indeed gaining in prestige. Dr. Schulze has very ably reviewed the subject and pointed out many conclusive points in its favor.

The importance of prenatal care cannot be overestimated; indeed the more intelligent classes demand proper observation, and clinic patients also co-operate more readily than formerly, both of which factors will eventually help reduce our obstetrical morbidity.

Patients having experienced toxemia in previous pregnancies often inform us that the blood pressure was not taken, that they were not advised regarding the manner of living—in fact, received no attention except an occasional urinalysis. This is not good obstetrics. It must not be forgotten that a steady increase in blood pressure, in spite of elimination and protein-free diet, is an ominous sign. A systolic of 160 is within the danger zone. Treatment should be sufficiently drastic to keep the blood pressure below this signal point.

Lazard recently reported a series of cases treated at the Los Angeles General Hospital with magnesium sulphate intravenously with very satisfactory results, especially in the control of convulsions. This may prove an important addition to the conservative treatment.

Dry or moist heat applied externally sometimes gives most gratifying results in patients with dry, inactive skin, and often the skin of these patients will continue to function properly after recovery.

In conclusion, would emphasize the importance of instructing patients regarding elimination, exercise, focal infection (especially teeth), reduction in protein diet, reporting regularly every two weeks for observation of blood pressure, weight, and urinalysis.

In this field I am satisfied we will render the best service to the prospective mother.

H. J. RING, M. D. (Ferndale, California)—Dr. Schulze has presented a very able and interesting paper on the conservative treatment and method of handling eclampsia. The comparisons and percentages given are very conclusive. In the mild and the medium types of severity it should have first preference of procedure, giving great-



est attention to measures of elimination of the toxins by the proper stimulation of the excretory organs.

Prenatal attention is of utmost importance and may be made prophylactic. Instructions regarding diet are absolutely necessary and should be rigidly enforced. Indications of the approach of toxemic tendencies ascertained by urinalysis, high blood pressure, or increase in temperature demands stimulation of elimination and the removal of the toxins from the system. For this purpose the greatest effects follow the use of the alkaline laxatives and the citrates of lithium, sodium and caffeine, and should albuminuria, with tissue infiltration, be present the infusion of digitalis in moderate but sufficient doses, repeated several times daily, is a most dependable remedy and should not be overlooked, and when given between the alkaline laxatives will carry a patient safely through the toxemic period when eclampsia might otherwise be anticipated at any time.

HARRY S. FIST, M. D. (Westlake Professional Building, Los Angeles).—The subject of eclampsia is always of interest. It is very ably summarized by Doctor Schulze. This sort of analysis of statistics is a great aid in selecting methods of therapy.

The controversy between the advocates of conservative treatment of eclampsia and those who insist on active intervention will probably continue until a more ideal method of treatment has been formulated.

As Schulze points out, it is recognized that prophylaxis is the most efficient treatment of eclampsia. Talbot calls toxemia of pregnancy the end-result of long-standing infection, with its oft-repeated emboli of bacteria which cause disturbance of metabolic balance. On this very rational basis we may easily see how many of these patients would be greatly benefited by early treatment. The treatment should be instituted not only before the onset of convulsions and before the development of pre-eclamptic symptoms, but even before the advent of pregnancy.

This means that the woman who has at intervals comprehensive and careful examinations by a competent physician who will direct treatment toward elimination of foci of infection and will instruct her as to proper diet, habits of living, and general hygiene, will run far less risk of eclampsia than the woman who trusts to luck.

The prenatal clinic is a step in the right direction, but under the present system the examinations are perforce superficial and perfunctory. It is not sufficient that a diagnosis of position and presentation be made, and an occasional estimate of blood pressure and albumen be done. She should have a complete physical examination, including ophthalmoscopic examination and determination of hemoglobin, red cell count, white cell count, differential count, and frequent complete urinalysis from a twenty-four-hour specimen, with microscopic examination in every case.

Common sense dictates that the treatment for eclampsia include the following: elimination, sedation, and avoidance of injury to kidney, liver, and nervous system by avoiding the use of such irritants as chloral, chloroform, and frequent manipulation.

Beck advises the use of early large phlebotomy, quiet darkened room, no stomach tube (has brought on convulsion in 50 per cent of his cases). He uses colonic irrigation once in twenty-four hours instead of every six hours.

My personal feeling is that the intravenous use of magnesium sulphate, used in accordance with the technique developed by Lazard, is at present our best method of treatment. In his series of cases the mortality has been lowered, and practically every patient not moribund on admission has been saved. The magnesium sulphate seems to increase elimination and to act as a sedative to the nervous system. Convulsions quickly cease, and the blood pressure drops. It is worthy of note that the patients who received a great deal of additional treatment did not fare so well as those who received practically nothing but the magnesium sulphate, with probably a little morphin. Lazard has concluded that it is well to give ample dosage early, and then leave the patient very much alone.

The classification of Eden, according to the severity of the attack, seems a good one, although it would seem

more rational to classify the cases according to the part of the body most involved. Roughly speaking, there are two types of the disease—the hepatic and the nephritic. The former develops quickly, without previous hypertension or albumen, subsides quickly after delivery, and has no tendency to recur. The latter shows long-standing and gradually increasing albumen and hypertension, which diminish very slowly after delivery, and tend to become more aggravated with each pregnancy.

I would like to see this good work of Dr. Schulze carried out further.

EDWARD NORTON EWER, M. D. (Oakland, California).—I am a convert from the operative to the conservative method of treating eclampsia, and yet I have seen a greater percentage of deaths from the latter than from the former. However, one must not decide such a matter from his own small personal experience. Great masses of statistics from many sources prove that the mortality of conservative treatment is about 9 per cent, while Caesarean in well conducted maternity hospitals in Great Britain shows 16 per cent, and at large 32 per cent (Fitzgibbon). Similar results for both methods have repeatedly been reported in this country, so to be consistent we must abandon section as we did accouchement force as a routine method of treatment during the height of the toxemia. My own preference is for the well-known Rotunda method without morphin. Morphin was given up at the Rotunda five years ago, because it was found that it did not materially influence the number or severity of the convulsions. My own experience with it is the same, and I believe it is not compatible with the rest of the eliminative treatment. As Schulze points out, it is convenient to divide eclampsia into severe and mild, according to certain more or less definite characteristics; and the opinion is that the mild cases give a good account of themselves under any of the conservative treatments. Stander and Duncan state that the severe type is accompanied with changes in the blood chemistry which serve to identify it and mark it for further treatment than the mild cases require. The  $\text{CO}_2$  combining power is greatly decreased, and there is a rise in the blood sugar. They give 15 to 25 units of insulin, usually with a protective dose of glucose. If this treatment serves to reduce the mortality in these severe cases it will be a most welcome advance. The Los Angeles treatment, that is to say, the introduction of 10 per cent solution of magnesium sulphate intravenously, I have seen tried but once. It was added to the Dublin eliminative treatment, but the case was of the extremely fulminant type, and the patient died ten hours after the first convulsion.

The only way to get the conservative treatment over is for workers in well-conducted centers to present the facts frequently and forcefully as Dr. Schulze has done.

DOCTOR SCHULZE (closing).—The chief value of such a study as this one is to formulate clearly in our minds the actual results with various types of treatment. As Dr. Ewer has pointed out, in a disease so comparatively rare as eclampsia, and one with such marked variations in clinical severity, the experience of any one individual can never be sufficiently great to enable him to draw trustworthy conclusions, even though he have a very large practice or control of a large clinic. In so serious a disease as eclampsia, the natural tendency is to feel that we must adopt strenuous methods of treatment, and I am sure we all rest more easily when we know that an eclamptic patient has been delivered. Yet, if we will keep clearly in mind the fact that combined statistics from many countries show a reduction of 50 per cent or more in maternal mortality, with practically no change in fetal mortality, with the abandonment of rapid traumatic methods of delivery, as Caesarean section or accouchement force, I am sure it will give us courage to continue with conservative treatment even in the face of an occasional unsuccessful result.

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An old darry got up one night at a revival meeting and said: "Brudders an' sisters, you knows an' I knows dat I ain't been what I oughter been. I'se robbed hen-roosts, stole hawgs, tole lies, shot craps, an' got drunk an' all sich, but I thank de Lord dere's one thing I ain't neber done; I ain't neber lost mah religion."

# BRIEF OUTLINE OF THE CAUSE AND TREATMENT OF CHRONIC POLYARTHRITIS

WITH REPORT BASED UPON ONE HUNDRED  
AND FOUR CASES TREATED

By REA SMITH \*

DISCUSSION by Harlan Shoemaker, Los Angeles; Joseph H. Shaw, Santa Rosa.

CHRONIC polyarthritis, in my opinion, has its origin in a focal infection in the intestinal tract, due to an unbalanced or perverted intestinal flora, made possible by the failure of some part of the ileocecal coil to empty itself properly. From the careful and repeated x-ray examination of more than one hundred cases of arthritis and the abdominal operative findings in ninety-eight cases, extending over a period of thirteen years, I have been able to draw some very definite conclusions as to the existence of an intestinal focus of infection, the nature of the intestinal deformity and the method of its production.

Infection of the teeth and tonsils are undoubtedly the cause of many cases of acute arthritis, and their removal quickly clears up the symptoms. But in chronic cases the removal of teeth and tonsils has, as a rule, very little permanent effect, the reason being that an intestinal infection has taken place and a larger focus developed so that then the clearing up of the head foci hardly affects the load of infection at all.

The similarity of the picture of the ileocecal coil in all of these cases has led me to the conclusion that the typical soil for development of arthritis is a congenitally mobile cecum which has been attached to the side wall of the abdomen by nature in an effort to lift up and anchor a prolapsing organ.

By a reduplication of peritoneum starting at the right colic artery and extending to the parietal peritoneum over the right kidney, the colon is rolled and folded so that it gives the appearance of an hour-glass, with the cecum thin-walled and toneless. There is usually a binding down of the ileum somewhere in its terminal 8 inches (20 cm.), increasing the torsion in the ascending colon so that the physiologic function of the colon is crippled and the cecum becomes an inert sac, which does not empty itself. This sac, constantly filled with culture medium, becomes infected with streptococcus, either from a head infection or from the terminal ileum, which is a natural habitat of the streptococcus viridens. The streptococcus becomes the predominating colon organism and we have an over-

balanced flora resulting, which in its turn becomes the focus of infection that keeps up the arthritis.

These patients all harbor great numbers of flagellate protozoa, ameba, probably incidental to the intestinal stasis, although they may be concerned in some way in the etiology of the disease. These parasites disappear after the surgical drainage of the pool and administration of oil.

The most striking results which follow the removal of the right colon has proved to me the colonic origin of the disease. This operation deprives the patient of his filter, and for ten days there is practically no water absorbed by the intestinal tract. It becomes necessary to supply water subcutaneously in order to prevent dehydration. My routine consists in giving a quart of salt solution daily by hypodermoclysis until the quantity of urine increases from approximately 1000 to 2000 cc. This happens usually from the tenth to the twelfth day. During this ten-day period the patient makes a wonderful recovery from joint trouble. In from forty-eight to seventy-two hours, the swelling disappears and the joints become more and more movable and the pain entirely disappears; but on the day the quantity of urine doubles, showing that the intestinal tract is again absorbing water, the symptoms recur. The perverted flora is still able to act as a focal infection and the joints then clear up slowly as the flora returns to normal. The removal of the right colon, however, particularly in debilitated patients, is such a formidable procedure that I have endeavored to develop a method of restoring the physiologic function of the crippled cecum by other methods. Since developing a simpler procedure, I have found it necessary to resect the colon but eight times in my last sixty-eight cases.

The interference with physiologic function of the cecum is easily demonstrated by dividing the constricting band with a sharp knife at its junction with the parietal peritoneum. The ascending colon immediately rolls out until 3 or 4 inches separate the ends of the divided band, and the cecum regains its normal color and contracts on mechanical stimulation. The interposition of tissue is the most important step in preventing recurrence, and free omental grafts are used to fill in all gaps and cover all denuded surfaces.

We have found the unpuckered mesoappendix, spread out and turned over toward the midline, is most useful in covering the denuded surface developing on the mesentery of the ileum after the division of a "Lane's kink," and I believe that again the interposition of tissue is most important in preventing a recontraction of peritoneal surfaces and a redevelopment of the kink.

Diagnosis is based on x-ray study of the gastrointestinal tract and bacteriological study of the stool. Routine gastro-intestinal examination with the immediate six and twenty-four-hour observations is not sufficient; observations every two hours from the sixth after ingestion of barium meal until the ileum is empty, and twenty-four-hour observations of the cecum until empty are essential. Also the mobility of the terminal ileum and cecum is studied as carefully as the motility. Often the break in the shadows does not become manifest until the forty-eight-hour

\* Rea Smith (502 Medical Office Building, 1136 West Sixth Street, Los Angeles). M.D. University of Pennsylvania. Practice limited to Surgery. Hospital connections: Hospital of the Good Samaritan, Methodist Hospital, Hollywood Hospital, California-Lutheran Hospital, and Los Angeles General Hospital. Publications: "Intestinal Indigestion" (California State Medical Journal, August, 1911); "Report of Twenty-eight Cases of Tropical Abscesses of Liver" (California State Medical Journal, July, 1912); "Neocolostomy and Colectomy for Arthritis Deformans" (Journal A. M. A., August 28, 1915); "Some Observations Concerning Post-operative Complications of the Lane Short Circuit and Colectomy, Surgery, Gynecology and Obstetrics, November, 1916"; "Surgical Relief of Intestinal Foci of Infection in Cases of Arthritis Deformans" (Transactions of the American Medical Association, 1922); "Relationship Between the Ileocecal Coil and Arthritis Deformans" (Editorial in Surgery, Gynecology and Obstetrics, December, 1922).



observation, when the colon thins out or completely empties from the middle of the ascending colon, leaving a densely packed cecum, which persists for an indefinite period. I have followed this up to 120 hours, and consider this densely packed cecum as evidence of obstruction by the breaking of the peristaltic wave and plan operation to restore the lost physiological function to the cecum. Either before or after the gastro-intestinal study, all of these patients are given a balanced diet for forty-eight hours, and stool smears are studied for gram negative and gram positive bacterial balance. In chronic arthritics, instead of a 2 or 3 to 1 gram negative predominance, it is usually from 10 or 20 to 1. Only occasionally do we find a gram positive predominance.

#### AFTER-TREATMENT

After establishing drainage, it is my belief that these patients will slowly restore their own bacterial balance without treatment on a mixed diet in from two to three years. Attempts to shorten this period are constantly being made, and I will briefly outline the routine now being followed.

Patients with gram negative bacteria predominating are given a non-proteid diet, paraffin oil, acidophilus milk, abdominal support, and recently vaccines (after Burbank) from the predominating intestinal bacteria. On this regime, most patients show great improvement in six months, but the evidences of active arthritis are present for a year or more. The symptoms follow very closely the laboratory findings on the stool check, the joint symptoms subsiding as the count approaches normal and lighting up when the count slides back.

The patient in whom gram positive bacteria predominate is put on a proteid diet—usually milk—and returns to normal, both in bacterial count and in loss of joint symptoms much more rapidly than the gram negative.

If there is no mechanical intestinal abnormality, but instead a general colon sluggishness, the after-surgical treatment, designed to re-establish a normal intestinal flora without surgery, will produce the same result. In a group of ten cases great symptomatic improvement has followed this treatment without surgical intervention. Other patients, treated medically without any improvement, have had an immediate relief of symptoms following a surgical removal of intestinal obstruction followed by appropriate medical regime.

The joints become amenable to orthopedic treatment as soon as the pain subsides and operations and manipulations can be carried out without fear of lighting up another attack of acute inflammation, which always hampers the orthopedic surgeon when he attempts any radical procedure in the presence of infection.

I want especially to register a protest against fixation of joints by plaster casts and against manipulation of joints during active inflammation. It is almost impossible to get function in joints that have been subjected to these two forms of treatment. It has been my good fortune to have the help and co-operation of excellent orthopedic surgeons in the reconstruction of many of these patients. They have

been able to get function in all types of deformed joints, except the ones that had been fixed. The previous surgeon, believing that he was dealing with an incurable disease, considered a stiff leg better than a painful one.

#### DISCUSSION

HARLAN SHOEMAKER, M.D. (Bank of Italy Building, Los Angeles)—Rheumatoid arthritis or chronic polyarthritis, as Doctor Smith is pleased to call it, is a very serious disease to the afflicted individual. First, it is very insidious in onset. Second, it is of a painful and disabling nature, and third, it is of long duration. These three factors, when brought together in one disease, make the patient a charge upon his friends and the public. This charge is not only an anxiety for the well-being of the relative or friend, but the financial outlay caused by the inability of the patient to help himself in any way, and by the prolonged personal service which must be devoted to the afflicted individual by his friends and relatives.

These factors justify any method of procedure that would ameliorate the symptoms. Dr. Smith has manifested great courage in pursuing his methods in the face of almost insuperable obstacles. His paper unfolds a world of technicality for surgeons of every specialty. The exact cause of arthritis is not known. Dr. Smith speaks of streptococcus viridens as one of its causes.

One would be inclined to think this organism a secondary invader, as it is in other diseases in which it is found associated. The third stage of tuberculosis might be cited as an illustration. The doctor lays a great deal of stress on obstruction to the alvin flow by bands and kinks. There are, however, innumerable cases on record in which stases has gone on to obstruction and become complete over a period of years. But arthritis has not developed consistently following the obstruction. Therefore, I naturally infer that his theory of permeability of the cecum as the cause of this disease, by flooding the joints and bursa with the infective agent, is nearer the correct explanation of the gross morbid pathology than any yet given.

I note by his paper that in the study of the gram positive and negative findings of the stool that the stools more frequently show gram negative bacilli than they do gram positive. The streptococcus viridens is a gram positive organism. One of the principal arguments in the doctor's paper that would lead me to believe an imperfect filter of the contents from the cecum is a factor in polyarthritis of the persons afflicted, is the result obtained in resection of the right colon as compared with any other method of treatment.

I have seen some of the author's patients, and my personal impression is that the right side colectomies suffer fewer recurrences and heal more quickly and are more often relieved of their pain than the patients upon whom plastic surgery of the intestinal tract has been done, or upon whom only remedial measures and diet has been carried out. The result in some of Dr. Smith's cases have been little short of miraculous. When a patient resumes his past occupation without pain and complete function of the joints, as has been accomplished by surgery in this very insidious disease, it would seem that his method is the method of choice for those suffering from chronic polyarthritis.

JOSEPH H. SHAW, M.D. (Hahman Building, 213 Exchange Avenue, Santa Rosa, California)—In commenting upon this splendid article, I feel that I am somewhat treading on holy ground, as I take into consideration the great work that Rea Smith has done along this particularly undesirable avenue of helpfulness in our profession.

Favorable comment is due for the large number of cases cited; the findings so carefully correlated for our convenience in summing up, and painstakingly minute study of all aspects of his cases.

Rea Smith has taken patients who are least sought by physicians. He has taken them after they were "old cases," medicated almost beyond help, and brought them relief and often comfort.

I have followed the work of this pioneer for a good

many years, and I have seen him achieve results truly marvelous.

Some twelve years ago I brought Rea Smith a patient from Kentucky. This was in the early days of the focal infection era, and my patient had every suspected place of infection cleaned out thoroughly, without benefit. Thanks to Rea Smith, this patient is living and comfortable. Iliosigmoidostomy was first tried, with immediate and wonderful improvement. However, as soon as the colon began to fill up the patient's symptoms returned. A complete colon resection was then done, with satisfactory results continuing up to the present time.

Many other patients I have known have been brought to Rea Smith's understanding care—cases medicated beyond endurance, and done to death by every cult known to Los Angeles. These patients have in the main been helped.

I agree with Doctor Shoemaker that Smith's "theory of permeability of the cecum as the cause of this disease, by flooding the joints and bursa with the infective agent, is nearer the correct explanation of the gross morbid pathology than any yet given."

I have studied this outline with deep interest and great care. I am firm in the belief that we have read a new signboard on the avenue of this phase of medical achievement. My only criticism of this article is that the author's surgical treatment of the ascending colon is not described more exactly. This I hope he will do in another paper, together with accurate proofs of his findings.

## SKIN DISEASES IN TWINS

By THOMAS J. CLARK AND FRANK H. STIBBENS\*

DISCUSSION by Moses Scholtz, Los Angeles; Hiram E. Miller, San Francisco; Samuel Ayres, Jr., Los Angeles.

**T**WIN births are uncommon enough to excite more or less general interest, the statistical ratio being about one pair of twins to eighty single births. We are not aware of the proportion of twins that show skin disease, but the literature is not large, so we can reasonably assume that comparatively few twins are so affected. We report three cases: one of psoriasis, one of acne vulgaris, and one of ichthyosis.

The occurrence of skin diseases in twins offers an unusual opportunity to study the subject of predisposition and inheritance in disease.

We expect to see children of the same parents show resemblance in form and feature, and our experience has been that twins are, many times, so identical that they are difficult to distinguish.

Quite naturally we inquire why do children of the same family resemble each other and still differ in many ways, and why are twins so identical? The answer is bound up in the broad subject of heredity.

Can diseases be transmitted by heredity is answered in the affirmative by many examples in families showing special deficiencies in this way; such an example, oft quoted, is hemophilia. In the case of the twins with psoriasis, we have a meta-

bolic disorder of the skin that is an instance of hereditary influences.

Twins of the same sex are derived from a single ovum and are so identical that they can be considered as parts of a double individual. If the skins of these twins vary from the normal and that variation tends to identity, then it is reasonable to ascribe these changes to inherited tendencies.

We must here distinguish between instances of true heredity, understanding by such expression the qualities bound up in the cells of the new individual and transmitted as the specific tendencies, modifying their growth and development by the composition of the chromosomes of the cells as differing from a possible transmission of a foreign substance, such as a disease germ or parasite, even granting that such could be possible.

J. G. Adami, in Osler's *Modern Medicine*, states that: "It is at the moment of fusion that the new individual begins its existence. Any influence acting upon and modifying it after this moment is something acquired by what is already a separate entity; it is not inherited."

The acceptance of this idea excludes the hereditary transmission of infectious diseases, such as tuberculosis and syphilis. These processes may be acquired after conception, and may be congenital.

If this is the truth, then a disease that we accept as an example of heredity occurring in twins of identical features, we cannot believe is of an infectious nature. We, therefore, would hold that psoriasis cannot be of an infectious nature.

But if the physical agents of infectious diseases are not transmitted by heredity, the effects of their reactions on the body cells may be passed on by heredity and so we have immunity to some disease as an example of progressive adaptation passed from parent to child.

Comparatively little is known of the natural laws underlying the controlling factors of heredity, but science in general accepts the Darwinian principle of new species resulting from the selective action of the environment upon variations of the individual, the law of crossing producing hybrids as discovered by Mendel, where the dominant qualities are maintained in the ratio of 3 to 1 to the recessive ones, and the law of proportional family qualities inherited by the offspring as propounded by Galton, this being that the child in his makeup, partakes of the qualities of his parents to the extent of one-half; of those of his grandparents, one-quarter; those of his great-grandparents, one-eighth; and so on, taking one-half of the preceding fraction for each step backward, so that the child is a composite of all the generations past, or at least of those qualities that are passed on by selection as determined by the immediate environment.

It is by such a process that we say nature maintains a balance, and those qualities survive that best suit the conditions.

The following cases are reported from the skin department of the Alameda County Public Health Service:

CASE 1—Twin boys, age 14 years.

Their parents are living and well. No history of skin trouble in the family could be elicited. The boys are high

\* Thomas J. Clark (Oakland Bank Building, Oakland, California). M. D. University of California, 1899. Graduate study: Vanderbilt Clinic, New York; Hospital Saint Louis, Paris; and Charing Cross Hospital, London. Practice limited to Dermatology, Syphilology, and Genito-Urinary Diseases. Hospital connections: Providence Hospital, Oakland; Alameda County Hospital, and Alameda County Health Center.

F. H. Stibbens (Oakland Bank Building, Oakland). M. D. Cooper Medical College, 1903. Practice limited to Dermatology, Syphilology, and Genito-Urinary Diseases. Graduate study: Intern, San Francisco Hospital, 1903-1904; General Practice, 1904-1907. Hospital connections: Alameda County Health Center. Appointments: Assistant Surgeon, Past Assistant Surgeon and Surgeon United States Navy, 1907-1920.



school students, are well developed, and of medium height. No history of preceding serious illnesses. They present a discreet nummular psoriasis rash of forearm arms, trunk, thighs and legs, and of the scalp. This has been present for three weeks. The lesions have been increasing from the start, and now vary in size from a split pea to a dollar. To see one boy with his psoriasis rash is practically to see the other, for the distribution of the lesions and their size and general appearance is identical. The rash appeared at the same time and on the same areas of the body, and the course of its progress has been at the same rate of change in both boys. They were given the iodid of iron internally and a salicylic acid ointment locally, and it was curious to see the disease clear up on them simultaneously in about one month.

#### CASE 2—Twin girls, age 12 years.

Of normal height and weight. No complaint, except the skin of both girls is harsh and scaly in the extensor surfaces of the arms and forearms and the extensor surfaces of the thighs. The mother reports the condition present from babyhood. The diagnosis is ichthyosis simplex.

#### CASE 3—Twin girls, age 13 years.

The mother reports them to have always been healthy. They are of good appearance and sturdy. They both have a mild adolescent acne vulgaris. Comedones are present, with also some discreet papules and pustules distributed upon the cheeks, chin, and forehead. In each individual the lesions have much the same appearance, and the areas of distribution about the face could be almost substituted in either girl.

The instances of skin affections of twins reported in the literature give diseases producing pigmentary changes, metabolic upset and atrophic or nervous changes principally.

H. W. Siemens gives his investigations in one hundred twins with skin trouble. He finds heredity, influences of freckles, chloasma, acrocyanosis, telangiectasis, seborrheic acne, eczema, hair color, and baldness.

Alfred Eddaws reports an interesting case of hydroa aestivale in girl twins.

J. B. Stone reports twin male infants with purpura, but there was an associated otitis media and rhinitis, so the case was evidently not one in which we could ascribe any hereditary influence.

#### CONCLUSIONS

Twins may be affected by any acquired pathological process, and with such would hold no more interest than other affected members in a family. The real benefit to be derived from the study of skin diseases in twins lies in studying those pathological conditions that are likely to be instances of true hereditary transmissions.

#### DISCUSSION

MOSES SCHOLTZ, M. D. (Brockman Building, Los Angeles)—Doctor Clark is to be commended for bringing to our attention so original and interesting a subject as dermatoses in twins.

I can contribute only a negative observation on the subject. I happen to have twins of my own, two boys, 14 years old. However, they do not look or act alike. One of them is over twenty pounds heavier than the other. They do not show any similarity in contracting and going through various diseases. At various times they had minor dermatologic disorders without any parallelism or close similarity. Apparently, they were derived from different ovi and belong to a different type of twins than those considered by Clark. Unquestionably, further observations along the lines originated by Clark would be of great interest to dermatologists as well as to the students of heredity.

HIRAM E. MILLER, M. D. (384 Post Street, San Francisco)—I have not had the responsibility of treating twins with generalized skin eruptions, nor can I compete with Doctor Scholtz in being the father of twins. I have, however, treated twins with acne vulgaris, with ringworm of the scalp, and with impetigo. A colleague from out of town wrote me several months ago for advice as to the treatment of twin boys with alopecia areata of the scalp. It developed on one child about three months after it developed on the other. The lesions were not in the same locations or of equal severity in each child. They did, however, clear in about the same length of time. I have enjoyed reading this paper very much, and I believe it is a valuable contribution to our meager literature on skin diseases in twins.

SAMUEL AYRES, JR., M. D. (Westlake Professional Building, Los Angeles)—I am sorry that I can add nothing in the way of personal observation to this discussion. While the subject is interesting from the standpoint of rarity, I fail to see how it proves anything in regard to the etiology of skin diseases. The conclusion that psoriasis is not of an infectious nature is derived, not from the fact that it occurred in twins simultaneously, but from the two premises (1) that all diseases due to heredity are not infectious, and (2) that psoriasis is due to heredity, assuming, of course, that the second premise is correct.

The careful observation and recording of simultaneous skin eruptions, believed to be of constitutional origin occurring in identical twins, may throw some light, however, on some of the obscure problems of biology, personality, etc., and possibly on some phase of the disease itself.

Knowledge for its own sake is always worth while. Any one bit of knowledge may be the very one needed by another investigator to complete an important piece of research.

DOCTOR CLARK (closing)—The authors of this paper wish to thank the gentlemen for the interest manifested in the subject. We believe there is a unique field for observation of hereditary influences in these twin cases.

In this technical age we are approaching a time when we must have a technical government. Politicians and small-town lawyers cannot translate science into everyday life for the benefit of their constituents, nor discuss with other than perfunctory oratory matters requiring knowledge of fact. Washington already is full of men of science serving our nation for a pittance, and under the dominance of the old-time politician. It is time they were taken from their offices in the Department of What Not, and moved to Capitol Hill with authority to act.—The Dearborn Independent.

In discussing intelligence and character, Dr. Ira S. Wile of New York pointed out that frequently the greatest criminals are the most intelligent. While defective mentality and crime are usually closely associated, one is not of necessity dependent upon the other. Intelligence is often expressed more fully in the things we do not do than in the things we may attempt. Instinct may dominate our motor senses, but character controls our higher emotions.—The Nation's Health, April, 1926.

The physical development of the child must be correlated with his mental and moral education. The home and school must share his training responsibility. Tendencies at this time seem to be toward lessening the home responsibility and charging the school, the psychologist, and the psychiatrist with the duty of turning out the best possible adult product.—The Nation's Health, April, 1926.

A consultation should be of use not alone to the patient but to both doctors parties to it. Every such meeting should teach something to those concerned; lack of a proper rapprochement spoils it all, and time, money, and effort are wasted in an utterly senseless manner.—Journal Medical Society, New Jersey, April, 1926.

"Andrews to Demand Teeth for Dry Law"—headline. A few wisdom teeth might not be amiss.—Virginian Pilot.

## - BEDSIDE MEDICINE FOR BEDSIDE DOCTORS -

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects and discussants invited. Useful extracts from letters will be published.

### COMMON SENSE AND URINARY LITHIASIS

**The Editor**—The subject for this issue of *Bedside Medicine for the Bedside Doctor* was suggested by Edward S. Pomeroy who opens the discussion. It seems well to review occasionally our knowledge about some of the common and troublesome conditions which affect man's health adversely, materially influence morbidity statistics, and even contribute to mortality rates.

The standing army of "stone carriers" at any roll call would show numbers well up into the hundreds of thousands. These patients are still pestered and exploited by patent medicine fakers and cultists who "cure" by laying on of hands, punching a backbone, giving something to dissolve the stone or convincing the patient that the stone is a creature of the imagination. Uplifters and medical reformers usually let the subject severely alone and thereby show some intelligence.

Whatever the conditions that induce the beginning of stone, about which there are many and changing theories and much worthwhile but still inconclusive evidence, the fact is clear that once started, stones "grow" from the injudicious use of food and drink.

Physicians practicing in urban centers where there are plenty of fine complete hospitals and where specialists of a score or more classes are constantly available for consultation, often forget that nearly half of the general population, and a smaller percentage of doctors, are not so fortunately situated. There are some interesting stories here by physicians serving on the outposts. They tell quite frankly of their problems with one of the common ailments of mankind and how they handle them. All of which reminds me of my first contact with these problems as they appeared to me as a boy living in Opie Read's country. The family doctor had made a diagnosis of "obstruction of the bowel" in one of my boy friends. The weather was warm. A kitchen table was moved out under the shade of an elm. The doctor anesthetized the patient and then turned the sponge (literal) over to a "granny." He proceeded to open the abdomen and let out the pus (undoubtedly a ruptured appendix) and incidentally what looked to me like acres of intestines ballooned out of the opening and were caught in a washtub half filled with warm water. Then the abdomen was flushed with comfortably hot water and then came the real job of getting the intestines back into the abdomen. Finally this was accomplished, and by some chance the patient recovered.

Other suggestions for subjects for *Bedside Medicine* and names of additional discussants are invited. A postcard to the editor is sufficient.

**Edward S. Pomeroy, M. D.** (Judge Building, Salt Lake City)—Many theories have been evolved as to the etiology of stone formation in the urinary tract, and much experimental labor has endeavored to throw light on this subject, but we are still far from any sound conclusion.

However, various factors have been undoubtedly shown to have some bearing on this frequent and distressing accident in the chemistry or physics of the human body, and a brief résumé will recall that infection in some patients seems to be related to stone formation, and in others long and chronic infection does not prove to be of any such effect. Again, there are those in whom urinary stasis

from any cause seems to be in some way connected with lithiasis, and in others no matter how much nor how long the condition of stasis persists there is no stone production. Foreign bodies undoubtedly often constitute the beginning of calculi. Other theories have as their basis, heredity, diet, climate, presence or absence of certain colloids in the urine, etc., none of which has proved anything conclusively.

The one constant factor present in all urine, without which there can be no urinary lithiasis is the condition of saturation and often even supersaturation of the urine with the so-called urinary salts. Given the condition of supersaturation, it is easy to precipitate a few crystals which may act as a nidus, and given also any of the above abnormal conditions in the urinary tract, undoubtedly a stone may follow.

It is a common and prevailing habit of our people to gulp down a lot of water with meals, thereby diluting the digestive juices, and think they are drinking lots of water, whereas, to keep a safe dilution of the urinary salts, water should be taken at more frequent intervals throughout the day. This, together with less ingestion of concentrated foods, would undoubtedly go a long way in reducing the frequency of that distressing, painful, and serious condition—urinary lithiasis.

**Walter G. Schulte, M. D.** (Boston Building, Salt Lake City)—The diagnosis of urinary lithiasis is often difficult to make. Given a frank case with all the classical symptoms of a chronic cystitis, ammoniacal urine, dysuria, with perhaps a sudden interruption of the stream, frequency, urgency, hematuria, etc., and a diagnosis of cystolithiasis is seldom wrong, and can easily be confirmed with a small sound. With a finger in the rectum, or vagina, the stone may be felt through the posterior bladder wall. The picture may be very different with small urate stones. The urine is hazy and has a normal odor. There is apt to be a sudden interruption of the stream, and some terminal pain, but may lack frequency, dysuria and gross hematuria. If these symptoms follow shortly after a severe colicky pain in the back, radiating to the thighs and testes or labia, they are indicative of stone.

Severe colicky pains in the loin, with sudden onset, hematuria, normal temperature and severe prostration, naturally make us think of nephrolithiasis or ureterolithiasis. But all these symptoms merely signify interference with drainage of the kidney, and

\* **Walter G. Schulte** (Boston Building, Salt Lake City). M. D. University Colorado, 1907; A. B. Stanford University, 1904. Graduate study: Intern St. Luke's Hospital, Denver, 1907-08; U. and Bellevue Hospital, New York, 1918; European hospitals, 1925. Practice limited to Urology since 1918. Hospital connections: Urologist, Holy Cross Hospital; Salt Lake County Hospital. Previous honors: Assistant in Physiology, Stanford University, 1900-03; Instructor in Chemistry, University of Colorado, 1904-07. Scientific organizations: American Urological Association; Fellow American College Surgeons. Publications: "Complications, etc., Following Prostatectomy" (Northwest Med., April, 1923).

\* **E. S. Pomeroy** (Judge Building, Salt Lake City). M. D. Northwestern University Medical School, 1916. Practice limited to Urology.



an effort to remove the obstruction. Hematuria usually means erosion somewhere in the urinary tract. There is the large group of silent stones which offer so little interference to the normal physiology that are often discovered accidentally, as it were. As a check upon diagnosis, we must bear in mind certain pathological states with allied physiology and symptoms, as intermittent hydronephrosis, due to obstruction of the ureter other than by stone.

At all ages we must consider new growths, benign or malignant, and in men obstruction at the bladder outlet, prostatism or stricture. In women a urethral stricture due to trauma at childbirth. Hemorrhoids must be considered as they are at times associated with urinary frequency. In younger people we must not lose sight of tuberculosis, or chronic ureteritis with stricture and pyonephrosis, pyelonephritis, pyelitis or hydronephrosis. Benign tumors with a long pedicle can produce all the symptoms of stone. Appendicitis, salpingitis, lumbar arthritis following apical dental abscess or chronic tonsillar infection may be confused with nephrolithiasis or ureterolithiasis.

In young women a urethritis may be so severe that it simulates stone by involving the trigone and producing most intense cystitis with hematuria. In young men, posterior urethritis and prostatitis are extremely common and a seminal vesiculitis can produce the classical picture of a nephrolithiasis. The bedside diagnosis of urinary lithiasis is often impossible and resort must be had to cystoscopy with ureteral catheterization, culture and urography.

**Lionel P. Player, M. D.** (384 Post Street, San Francisco)—The etiology of urinary lithiasis is still a subject for conjecture. Recently an organism has been isolated which may enlighten us, as it has been shown experimentally to cause an encrusted cystitis under certain conditions. A supersaturated crystalloid urine, undergoing change in reaction, might possibly favor precipitation; the precipitated salts alone or in combination with bacteria could form the nucleus of a calculus.

Differential diagnosis between urinary lithiasis and inflammatory lesions or neoplasms, etc., within the tract is often difficult because the symptoms are similar. Symptoms not rarely are referred to the opposite kidney and nausea and vomiting are common with vague urinary symptoms. Again acute abdominal and pelvic conditions, prostatitis and seminal vesiculitis, simulate closely the symptomatology of urinary lithiasis and are difficult of differentiation in the absence of laboratory facilities. Prostatic lithiasis may cause all the symptoms attributed to a supposed vesical lithiasis. Occasionally the symptoms are referred exclusively to the gastrointestinal canal with nausea and vomiting and no renal colic. The pain may be referred to the opposite kidney which may lead to tragic error or the symptoms may center in the bladder only.

The bedside physician has at his disposal the following methods for diagnosis: A careful history, including former attacks, if any, and the question of former residences. Careful surface and deep palpation and palpation bimanually through the rectum for bladder and prostatic calculi. Bimanual palpa-

tion through the vagina may reveal stones along the lower portion of the ureter and allow one an occasion to manipulate a calculus into the bladder. A Thompson stone searcher might be used. Urinalysis, including microscopic study of centrifuged sediment, both wet and stained, a total phenol-sulphon-phthalein test, and a chemical examination should be done.

In obscure cases, x-ray and laboratory examinations, including cystoscopic study of pyelograms, ureterograms and cystograms, should be done, then the opaque fluid should be drained from the catheter and stereoscopic and plain films taken, because a stone not dense enough to show by ordinary methods may become apparent when coated with an opaque fluid. Films of the prostate also should be taken. By these methods it can be determined whether treatment is to be palliative, manipulative or surgical. Diet and medication have no influence in preventing stone formation. Dilatation of the ureter up to twelve or fourteen French with Walther's bulb ureteral bougies and correction of malformations and obstructions where possible offer the best solution to the problem of recurrence.

Nephrectomy should be performed only in extreme cases, as the percentage of calculus formation in the remaining kidney is quite high.

**Floyd F. Hatch, M. D.** (Salt Lake City, Utah)—A stone in the urinary tract is a dangerous antagonist. It should be diagnosed early and dealt with promptly and skillfully.

Small "silent" renal calculi with trivial symptoms are often justifiably undisturbed for extensive periods, meanwhile keeping the patient under scientific observation. Gravel not infrequently passes the length of the ureter and is eliminated from the bladder without serious consequence except for the distressing subjective symptoms of the pain of ureter colic. But the larger concretions with rather localizing symptoms usually menace health and proceed to do violent and often irreparable damage when their demands for attention pass unheeded.

Diagnosis is based on a very accurately taken history, general physical examination and complete urinalysis, including microscopic study of the sediment. With characteristic kidney, bladder or ureter pain, positive urinary findings demand further intensive study of the urinary tract, while negative urinary findings seldom occur following painful attacks due to urinary lithiasis and when present tend to divert our diagnostic search to other possibilities. Good radiologic aid is now available for nearly all doctors, and should be the next step followed. Positive diagnostic information of great value is

\* **Floyd F. Hatch** (Salt Lake City), M. D. Harvard University 1914; A. B. University of Utah, 1912. Graduate study: Medical intern Peter Bent Brigham Hospital, Boston, March 1, 1914, to January 1, 1915. Surgical intern Massachusetts General Hospital, Boston, January, 1915, to October 1, 1916. Resident Surgeon Massachusetts General Hospital, October 1916, to February, 1917. Practice limited to General and Urologic Surgery. Hospital connections: Surgeon Intermountain Clinic, Salt Lake City, Utah. Surgeon Urologic Service L. D. S. Hospital, Salt Lake City, Utah. Previous honors and services: Lieutenant Medical Corps United States Army, July, 1918, to August, 1919. Scientific organizations: Salt Lake County Medical Society; Utah Medical Association; American Medical Association; American Urological Association. Publications: "The Surgical Treatment of the Obstructing Prostate" (California and Western Medicine, March, 1925).

frequently obtained; yet, negative radiologic reports give due service in laying an accurate foundation for a correct diagnosis.

The old method of passing a small sound or "stone searcher" into the bladder in cases of suspected bladder stone is often of positive value and should be a routine procedure. Because of large rectal masses of fecal material, I have seen many large stones in the bladder overlooked in reading radiographs that were later positively diagnosed with a metal sound.

Beyond the procedures enumerated, when the diagnosis remains incomplete or obscure, it is wise to enlist the aid of one specially trained in the more intricate urologic problems and procedures, that the patient whose rights are paramount, shall not suffer delay in obtaining a proper diagnosis and effective treatment.

**Warren Shepherd, M. D.** (Templeton Building, Salt Lake City, Utah)—Calculi are agglomerations of crystals held together by a cement substance. The crystals are formed of salts normally found in the urine. Precipitation of these crystals in the urine occurs no doubt as a result of their presence in excessive quantities, or as a result of chemical changes, or possibly due to bacterial action.

In sections where "hard water" is drunk, the percentage of urinary calculi is high. This was noted many years ago in the "stone counties" of England. Several years ago I heard Ochsner say that in post-operative cases of urinary calculi he always advised the patient to drink distilled water and had never seen a recurrence as long as the patient drank only distilled water, but when the patient again drank hard water concretions began to form. Sudden change in urinary reaction will doubtless precipitate masses of crystals. What part bacteria play in this process is a subject for further investigation. The eating of highly concentrated foods without an abundance of water may cause excessive quantities of crystals in the urine. Also strenuous physical exertion with scanty intake of fluid causes excessive crystalline formation in the urine.

In the absence of more definite knowledge, common sense tells one to keep the urine from becoming over-saturated by watching color and specific gravity and to keep it slightly acid because this is the normal condition. It is well to bear in mind that much can be done to maintain a bacteria-free urine.

**Homer E. Rich, M. D.** (Vernal, Utah)—The chief reliance of the country practitioner must be upon "common sense," and thus, too often, his clinically diagnosed stone turns out to be ureteral stricture, discovered after he has referred his patient to a specialist. The country doctor learns from his

experience to separate other lesions from the urinary tract and after a few hypodermics have not been followed by disappearance of the symptoms, he gets the patient to one who has the training and the equipment to make a proper diagnosis. The emergency cases he can't transport he has to take care of as best he can, often with no trained help to assist him. I am speaking now from the experiences of a country doctor, who is associated with three others in a united effort to give the best service that they can give, 120 miles inland off any railroad, where high mountains make his community an island in the winter with no easy way out to consult specialists of any branch of medicine. How many surgeons nowadays can say they have opened an abdomen to let pus out from a ruptured appendix, under a pine tree up in the mountains with no one who ever saw an operation before, with no one to give an anesthetic or to render any other assistance, and to transport his patient as soon as possible to civilization! To take care of about 10,000 people without trained nurses or hospitals is a job. Four of us have got to use lots of "common sense" and some skill at the bedside. We have x-ray and clinical laboratories in our ten-room clinic in town and use an army stretcher across the back seat of a car to transport all possible patients in for better diagnosis. However, a lot of bedside advice, diagnosis and care have to be given to patients with "urinary lithiasis" away from contact with modern equipment. To differentiate a Dietl's crisis from a stone and invert the patient for proper support of the loose kidney, requires more common sense. In fact, I believe I may have jolted back into the kidney pelvis some stones that had tried to descend. I have known men and women to carry large bladder stones for years and stand the recurring attacks of cystitis and pyelitis without much complaint. Remote as we are—where so few are free from severe pyorrhea and where the purest of water is hard, one wonders what plays the biggest roles in the production of stones, the focal infection or the concentration. We see no pyorrhea or other focus of infection in animals, but we find a lot of kidney and bladder stones in the killed sheep, hogs and cattle.

To sum up, I would say:

1. That modern means to make a proper diagnosis can be utilized by the country doctor, often only under great difficulties.
2. That proper technique cannot be perfected without experience, and patients should be referred to the specialist wherever possible.
3. That the specialists to whom we have referred patients have been fair and square with us, for our patients have been sent home as soon as possible for the follow-up work, and generally return to us with a better feeling for the country doctor working under his obvious handicaps.
4. Better equipment and modern hospitals are needed in remote localities where it is difficult or impossible to transport patients to places where they exist. The doctor cannot buy the needed equipment and expect his patients, who only pay a minimum fee, to pay for it. More especially, trained men will remain in the country or go to it, if the people realize they have got to put expensive diag-

\* **Homer E. Rich** (Vernal, Utah). M.D. University of Illinois, 1910. Graduate study: Intern Michael Reese Hospital, Chicago, 1910-11. Graduate work Chicago, three months, 1924. Practice: Medicine and Surgery. Previous service: Medical Corps United States Army, France, 1917-19. Regular army. Hospital connections: Chief of Staff, Vernal Hospital (under construction). Scientific organizations: Uintah County, Utah State, and American Medical Association. Appointments: Vice-President Utah State Medical Association. Other facts: Associated with three other physicians, 120 miles off any railroad, high mountains surrounding; we have to do almost all our work with 10,000 people. Publications: "Co-operation or Competition with the Country Doctor" (Northwest Medicine, February, 1923).



nosis material in municipally owned hospitals for the doctor's use.

George P. Cooper, M. D. (Angels Camp, California)—Common sense consideration of this frequent pathological condition leads one to realize how little is positively known of the origin of concretions in the urinary tract. The formation of a calculus presupposes the presence of a nidus around or upon which the urinary salts form. Infection, ascending from the urethra or bladder, is probably a prime factor in the formation of the nidus upon which the calculus is formed.

The symptoms present on the passage of a ureteral stone are frequently the first warning which the patient and attending physician have of the probable presence of nephrolithiasis; and the retention in the bladder of a passed ureteral calculus can form the nidus of the large cystic stone or stones so frequently found.

The differential diagnosis, ably set forth in Player's discussion, requires not only "common sense," but often clairvoyant sense to avoid error.

Cystoscopy, pyelography, x-ray localization and laboratory technic are necessary aids to exact diagnosis and treatment, and their co-relation to the presence and localization of urinary lithiasis can be mastered only through application to multiplicity of cases.

To the specialist who devotes his time and diagnostic acumen to this modern branch of the science of medicine, should be referred suspicious cases of urinary lithiasis, as by so doing the physician engaged in unlimited practice will best serve the interest of his patient suffering from this all too common and serious affliction.

J. D. Edmundson, M. D. (Hicks Building, Orland, California)—The cause of lithiasis is—I don't know and I don't know anyone who does know. There are a great many guesses called hypotheses, which are little better than idle opinions; none of them has been proved.

We should be like Job who said: "It is enough for me to know that my Redeemer liveth." It is enough for me to be able to recognize a concretion in the ureter or bladder, which is reasonably easy if you use common sense—and don't begin to think about a hospital and about getting some one to tell you what is the trouble with your patient.

If you find the patient able to pass only a few drops of urine at short intervals, walking the floor and swearing like a drunken sailor, you know you have a stricture, enlarged prostate, or stone in bladder, which you can soon settle.

On the other hand, if you find him as white as a ghost, rolling like a mule with the colic, praying like a deacon, you know he is passing a cobblestone from kidney to bladder.

Give him H. M. C. at once to relax muscles that the stone may pass, doing as little damage as possible. Give arbutin for three days. Resort to the knife if necessary.

\* George P. Cooper (Angels Camp, California). M. D. Cooper Medical College, 1906. Practice: General. Graduate study: St. Luke's Hospital, San Francisco, 1906-07. Hospital connections: St. Joseph's Hospital Staff, Stockton, California.

\* J. D. Edmundson (Orland, California). M. D. Medical College, St. Louis, 1888.

## CLINICAL NOTES, CASE REPORTS AND NEW INSTRUMENTS

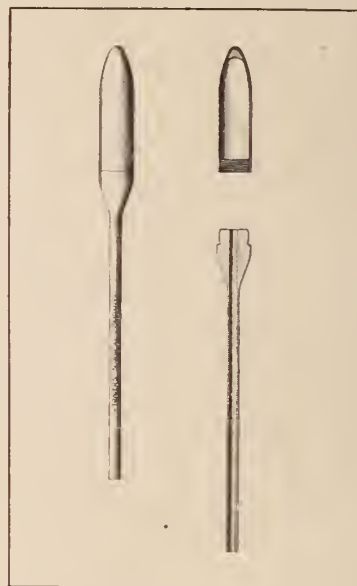
### A NEW INSTRUMENT FOR RECTAL STRICTURE

By DUDLEY SMITH, *San Francisco*

In the Medical Record of March 4, 1922, E. Jay Clemons of Los Angeles describes a new method of treatment for rectal stricture by means of frigidotherapy, with which he has reported extraordinary results. He says:

"Conceiving the idea that cold applied to organized rectal stricture would cause relaxation, the author improvised the following means of application:

"Carbon dioxide snow is obtained by the usual procedure of allowing the gas to escape from a tank into a pocket of chamois. A rubber finger-cot is filled with snow thus obtained. A thread is tied around the free end of the finger-cot placed over the projection of a retaining catheter in such a manner as to allow the escape of gas



from the melting snow through the catheter. The catheter is inserted into a piece of rubber tubing, the diameter of which is such as can be inserted into a proctoscope, with the filled finger-cot projecting.

"The application is made by inserting the proctoscope, withdrawing the obturator, and plunging the filled finger-cot into the strictured area. The proctoscope can then be removed, leaving the rubber tube with the catheter in place, thus providing a means for the gas to escape."

The instrument illustrated herewith was devised to render the application of Clemons' method less difficult and more effective. It is a hollow metal instrument shaped like the ordinary rectal dilator, with a metal tube attached to serve as a handle for inserting the instrument and for the escape of the carbon dioxide gas. The tube is attached by a thread to which vaseline is applied before screwing it up. The vaseline is congealed by the cold and makes a tight joint, so that no gas escapes into the rectum. The instrument is made in four sizes, ranging from one-half inch to seven-eighths inch in diameter. When ready to use, it is lubricated with liquid petrolatum and inserted into the stricture, a size being used which may be inserted without pain. The instrument should not be used as a dilator.

The advantages of this instrument are:

1. The snow can be tamped in firmly, allowing much

more to be used than in a finger-cot, and therefore much more rapid relaxation of the stricture.

2. The instrument is easily inserted into the stricture without the use of a proctoscope.

3. Larger sizes may be used as the stricture dilates.

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Edward J. Lamb, Santa Barbara, in a recent study of elementary and grammar school children of Santa Barbara for enlarged thyroid gland found that 13.2 per cent of the children between the ages of six and fifteen years have an enlargement of the thyroid gland to some degree above normal.

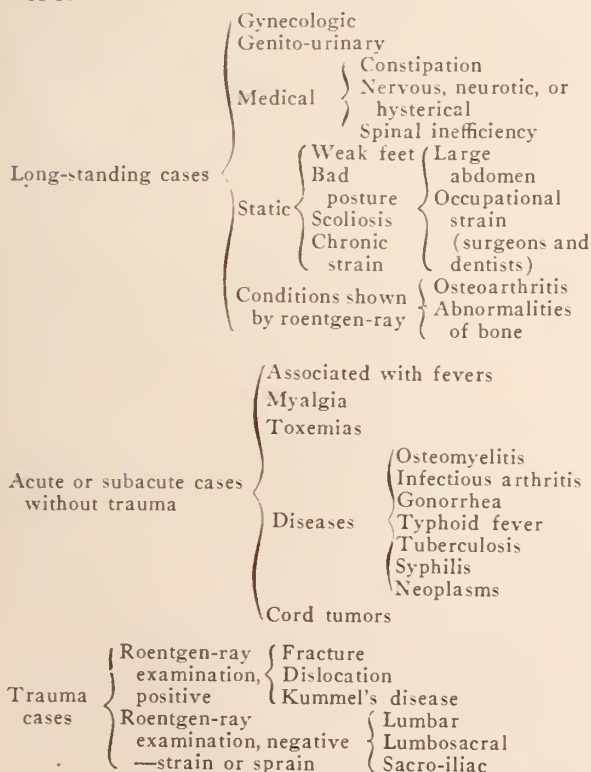
Dr. Lamb's findings, from an examination of 2783 children, are seen in the following table:

Age	6	7	8	9	10	11	12	13	14	15	Total	Girls	Boys
Moderate	6	27	29	55	57	28	20	13	2	4	241	180	61
Average	1	7	9	22	19	19	13	5	1	2	98	85	13
Large	5	4	6	6	4	1	1	1			28	26	2
											367	291	76

Of the 13.2 per cent children having enlarged thyroid, 79.2 per cent were girls and 20.7 per cent were boys. An analysis of the city water has shown it to be almost iodine free. The supply of water is not well water, but surface water. The above survey is the first goiter survey to be made on school children of California and may be of comparative value to other investigators.

\* Edward James Lamb (1728 State Street, Santa Barbara). M. D. Tufts Medical College, 1922; S. B. Tufts College. Graduate study: Peter Bent Brigham, 1922, Boston; St. Francis Hospital, Hartford, Conn., 1922-23; Los Angeles Children's Hospital, 1923-24. Practice limited to Pediatrics since 1924. Hospital connections: Pediatrician, Cottage and St. Francis hospitals, Santa Barbara. Previous honors and services: Resident physician Children's Hospital, Los Angeles. Scientific organizations: Santa Barbara Medical County Society, California Medical Association, American Medical Association, and Southwestern Pediatric Society. Appointments: Santa Barbara Public School Physician.

#### . Classification of low-back pain for purposes of diagnosis:



—John M. Barry, Archives of Surgery (11:6: December, 1925).

## EDITORIALS

### WHAT IS PUBLIC HEALTH?

Is it the practice of medicine among individuals and families by a flock of government bureaus or is it the legalized conduct of matters of health promotion and protection that affect society as a whole, leaving to personal health physicians the responsibility of looking after individual and family health?

If infant mortality is too high, shall the public health officer spot the landscape with tax-supported "clinics" for the diagnosis and treatment of children or should his efforts be concentrated on the control of milk supplies, housing conditions, and other general health functions and leave the care—including diagnosis and treatment—of individual children to the family doctor?

Because people are digging their graves with their teeth by hundreds of thousands, shall our government scatter tax supported "health centers" like gas and oil service stations over the landscape to diagnose and prescribe for individuals or should they limit their efforts to health education, control of pure food and drink, and similar public services?

Because many prospective mothers are stupid or careless of themselves and their offspring, shall public health officers supply them with a stereotyped correspondence course of medical advice (treatment) and spend huge sums of money to collect them in crowds to be lectured to, examined and prescribed for, or should they use their efforts to induce these patients to consult some private physician or the personal health service provided by the county for the poor?

In our ability to sanely solve these and scores of similar questions lies the hope of the health betterment of our people. It would indeed require a seer to predict the outcome. It is stupid to ignore the existence of a chasm—growing wider and deeper—between some militant groups of public health officers who are out to governmentalize the practice of medicine and personal health doctors who retain the conviction that the individual should continue to have the right to select his personal and family health counselor, his marital mate, and a dog if he wants one.

CALIFORNIA AND WESTERN MEDICINE frequently has called attention to various angles of this controversy. Last year we published a resolution of a county medical society condemning unnecessary interference in the practice of personal health medicine by a newly appointed public health officer. An annual "conference" of legal and political officers of municipalities, including some public health officers, condemned one of our editorials which had been approved by the council of the California Medical Association. This "condemnation" brought a reaction that surprised some of these politicians, very few of whom were licensed to practice medicine or even any of the several forms of cultism legalized by generous California law.

Some duly appointed health officers are reported



to be active opponents of vaccination and many of them are ignorant of even the most elementary principles of health and disease. Is it any wonder that efforts to require them to secure licenses to practice meets with political opposition? Letters of the tenor of one published in this issue (page 820) form an interesting part of our mail. They come from many places and from people in all walks of life and are a reflection of the widespread and growing opposition toward paternalism and bureaucracy in all forms of human activity, including those pertaining to health. Some official public health "officers," who a few years ago were militant in attempts to so scramble public and personal health service, that those who serve individuals and families would be forced to become agents of public health dictators or change their occupations, have seen the clouds, have shortened sail and have headed for safe harbors. Other Mussolinis of health who got started late in the race are still heading with full sail into the approaching storm.

Too many public health "officers" seem to think that a few weeks or months of "intensive training" in some school of public health, a salaried political job gives them a diagnostic acumen and therapeutic skill entirely above the comprehension of the educated family doctor.

*Public versus Personal Health:* Both public and personal health services being essential, what points of contact do we need? Public health deals, or should deal, with masses and is the function of public health doctors; personal health deals with individuals and the family and is the function of the personal health doctor. Economic insolvency of the individual should not constitute an exception to this definition. Public health service should be precisely the same for rich and poor, and in no instance should become personal except as necessary to protect the public. Personal health service should be left to personal health doctors who are of our population in the ratio of one to 500. The only distinction between personal service for the poor and the well-to-do is, that for the insolvent the service should be paid for by the municipalities, counties or states. This may be done by compensating the personal health doctor of the patient's choice upon a fee basis or less satisfactorily by supplying the poor with salaried personal health doctors. If every personal health doctor were a sworn officer of the public health just as every attorney is an officer of the courts it would substitute a definite, official and effective articulation between the personal health doctor and the public health doctor.

If the oath of public health office were administered by the Board of Medical Examiners in connection with granting licenses to practice medicine, and if violation of the duties inherent in this obligation were included in medical practice acts as an additional reason for discipline or revocation of license, much improvement in human welfare could be foreseen with advantages to both public health and personal health doctors and to the people. We are, of course, aware of the fact that this is not a new idea; that certain features of the suggestion have been long in practice in certain countries; that it has been "talked around" in our country and that

certain of its features are covered in existing laws. Personal health physicians, for example, are required to report certain classes of infections to the public health authorities but such reports are more abstract, less fraternal and therefore less serviceable than they would be as between colleagues and fellow officials of a common service. Punishments for failure to report reportable infections upon those rare instances in which they are inflicted are now a result of court action. Under the suggestion made, derelictions of duty would be first considered by the medical licensing authority precisely as are other failures of physicians to live up to their responsibilities. Of course the inherent right of appeal to the courts would in no way be invalidated.

*Are Public Health Authorities Practicing Medicine?* Many of them are and some are not. Some who formerly were engaged in active competition with personal health physicians in practice among both well-to-do and the poor, have publicly announced their withdrawal from the field of individual and family practice. Others limit their private practice to the poor. Many only carry their individual practice to the point of diagnosis. Large numbers of them, often with the support of non-medical civic bodies, make diagnosis and only carry treatment to the point of giving advice and prescribing diet, living habits and most everything else that family doctors do, except giving medicine and operating. Many of these services are rendered by people who are neither educated nor licensed to assume such grave responsibilities. In several great congested centers of population people are so used to being guided by the crack of the paternalistic whip, the monopolistic whistle or the political calliope, that the additional yoke of socialized medicine disturbs them but slightly, even when dished out through clinics and health centers largely controlled and frequently served by paid agents without any or only a modicum of knowledge of the uses and dangers of the methods they are using or of the bodies and minds they use them on. The situation as it stands is an intolerable one and one would be wise indeed who could predict the future.

In California where more people have more "free" (supported by compulsory and voluntary taxation) assistance of more varieties from more sources than any other, and where even nature is lavish with her blessings, we hold, for example, the world's record for smallpox, and its hotbeds are in cities studded with "free" clinics and "free" health service stations of a bewildering variety, where a paid personnel are pleading with the rich and poor to come in and be protected or cured. It would be interesting to know what the youth of today are going to do about health when they come into their own.

## DRUG ADDICTS AND DRUG ADDICTION

### Duties and Responsibilities of State and Local Government

(Continued from page 662, May issue)

#### I

In the first of this series of three articles a distinction was made between the drug addict as a patient and narcotic abuses as a problem. Addicts, it was shown, are found chiefly among those often designated as problem citizens, a fact that indicates the intelligent course for

preventive and curative methods. Except in one comparatively small group, drug addiction is but one—often the least important—of the multiple infirmities of the victims, and it was postulated that treatment, to offer any hope of permanent cure, must be of the patient for all of his infirmities that may be found by a thorough examination by an educated physician. Similar correctives widely applied to the larger groups of problem citizens who are potential addicts are also basic in preventive efforts.

It was shown, and is here reiterated, that while drug addiction is quite as much an individual health problem as, for example, smallpox, the broader question of narcotic control is a problem of society as a whole; as much so as is crime, juvenile delinquency, the protection of persons and property and similar problems, all of which have their tap roots in the same social quagmires.

Viewed in this light, drug addiction is serious enough, important enough, complicated enough, in every state and political unit, to occupy the spare time and spare funds of worth-while citizens. If we will only concentrate upon an intelligently conceived plan and attack simultaneously upon all important fronts, maintaining healthy contact with the campaign in other states and with national efforts, all of our forces will be so effectively engaged that we may convert a growing evil into a declining one. We will be successful precisely as all of our forces, official and voluntary, legislative, law-enforcing, administrative and advisory, work in concord.

Any promising plan to help addicts must recognize: (1) *That* there will be addicts as long as human frailties are what they are; (2) *That* habit-forming drugs are the most valuable, and for certain conditions the only drugs known to science for the relief of suffering and the treatment of disease; (3) *That* legal and other restrictions of honorable, adequately qualified doctors should be elastic enough to permit them to render intelligent service without the ever-present fear of violating some superlatively stupid law or regulation designed and enforced as a highly profitable revenue measure; (4) *That* license to practice medicine and use, not only habit-forming, but other dangerous substances, should be based upon education and character, and should be far more rigid than it is; (5) *That* control over doctors, including the power of discipline, should be vested in competent state authority qualified in medical and health welfare and not tax-collecting bureaus; (6) *That* from health, as well as administrative points of view, the nearest practicable approach to "standardization" of addicts is to group them as those (a) *who* are otherwise reasonably healthy—physically, mentally, socially; (b) *who* are otherwise infirm or defective, of correctable conditions; (c) *who* are otherwise incurably infirm or defective; (d) *who* are criminal, degenerate, or dangerous.

Obviously individuals in each group vary so widely as to require personal medical care, but the grouping helps administratively. Obviously also the group location, as well as effective personal assistance, of every addict depends primarily on an accurate and complete diagnosis and prognosis arrived at by thorough medical study.

## II

Addicts who are otherwise reasonably healthy (physically, mentally, socially) are in the first instance medical problems. No one knows how many of them there are, but many of them are successfully treated and cured by physicians acting in their usual, confidential, personal service capacities. There is no reason for government or any other agency to interfere in this phase of drug addiction, except when the patient for one reason or another passes into one of the other groups or when the physician proves unfaithful to his trust. It is the duty of the state to safeguard patients and the public against the frailties or criminal propensities of such physicians. Such safety devices should be provided and enforced by the Physicians' Licensing Board as a health-conserving measure rather than by tax collectors for purposes of revenue.

Professional secrecy and intelligent, personal, sympathetic service is as helpful in the successful management of this class of patients as it is in those suffering from

illnesses due to illicit sexual relations. Those who are unable to bear the costs of personal service should have it under competent care, provided by the county or state. The usual attempt to brand these patients as drug addicts, by law and regulations, or make the honest doctor who treats them a law violator is an asinine blunder that only a government could be guilty of and survive.

Addicts who are otherwise ill or defective, of correctable conditions, are also pre-eminently medical problems; more difficult and more expensive to cure than are those of the preceding group, to be sure, because the cure of their addiction depends primarily upon a simultaneous cure of their other infirmities and defects. The unusual time and consequently increased costs of correcting multiple defects breaks down the financial solvency of many and thereby transfers the problem from the family doctor to the health machinery of the state or county. Evidence seems conclusive that most counties and some states are not prepared to render the quality of service many of these patients—or others for that matter—must have if they are to be restored to society as useful citizens, and without which many of them drift into the class of incurables and become a permanent liability of the state. We are therefore confronted with the responsibility of markedly improving the existing health agencies of counties and states or of creating new ones. Until new ideas of civic responsibilities and methods of discharging them have been widely inculcated, there is no promise that new health institutions would be any more intelligently efficient than are existing ones. These for the most part are appalling, and they will not be materially improved, particularly in many counties, until public interest has been aroused and sustained.

However, regardless of the quality of the service society is prepared to render these unfortunates during the active stage of medical treatment, an additional service for convalescents is necessary. The period between removal of defects and the causes of illness and complete ability to again take up life's burdens—convalescence—is a trying one to all patients and a particularly delicate one for those familiar with the temporary comforting possibilities of certain drugs. Many varieties of institutions, homes, farms, camps, colonies, and what-not have been proposed to fill this distinct gap in our health conserving activities, and some are in operation. California, through the initiative of the legislative committee under the chairmanship of Senator Sanborn Young; the California Medical Association through its narcotic committee, of which Dr. Morton Gibbons is chairman; the Federated Women's Clubs through a special section under the chairmanship of Dr. Louise B. Deal; the Commonwealth Club through its section on public health; the Los Angeles Medical Association through its committee, of which Dr. William Duffield is chairman, and other organizations, is now engaged in an effort to make plans for a more effective campaign against this vice.

Addicts who are otherwise incurably infirm, defective or irresponsible because of physical, mental, or social ailments are a large, probably the largest, group of drug victims, and they are a difficult problem. This group is distinguished from those just considered chiefly by being more of a problem for social assistance than one for scientific medicine. The diagnosis, as for individuals of all other groups, may be made only by careful study by competent physicians, and a certain amount of intelligent and sympathetic medical care is required for each patient as long as he lives. For many of them the protracted use of a certain amount of narcotic drugs is indicated by scientific and humane considerations. But the chief problem—large because of expense—is one of humane care, which is supplied by private funds for the well-to-do and should be furnished by the state for all others. This care, in the first instance, is that which ought to be provided for precisely the same group of citizens who are not addicts. The tendency is to overlook the obvious fact that drug addiction is the least important of the troubles of these individuals; that "cure" of the addiction usually only adds to the difficulties of the patient's care; increases suffering; may convert a harmless patient into a dangerous one and often shortens life. These patients are more numerous than is generally appreciated. They are in all walks of life, and many of them extend their



useful lives by the sustaining and comforting help of narcotics wisely used.

Authority to decide when, how much, and to whom of these patients narcotics may be given, should be taken out of the hands of tax-collecting bureaus, where it now largely rests, and put under public health or other competent medical authority. The ever-tightening cordon of rules and regulations with which tax collectors surround the doctor, and a large and important group of his patients, has become so stupidly obnoxious that no intelligent, honest physician, nor even a consultation of a score of them, can use his best judgment in employing remedies for certain patients which he believes they should have, without permission of a revenue agent, which may be secured by complying with red tape more suitable for the government of criminals than for members of a humanitarian profession. In "justification" for their official red tape and espionage by under-cover agents over doctors and patients, revenue agents point to the criminals they find among doctors and to the false diagnoses they discover among alleged sick and suffering patients. Such criminals do exist, and decent physicians, even more than others, want to see them caught and adequately punished, but they do not believe that the present methods of revenue bureaus are intelligently effective either in licensure or subsequent control of those they license. Important stupidities of present methods are shown in the licensing, by a revenue bureau, of "doctors" in California, for example, who never saw the inside of a good medical school; forcing suffering, solvent citizens to either have their infirmities written into government documents or resort to illegal methods of securing the remedies that their physicians—or even a group of physicians—believe best for them; requiring the decent physician to either become a party to the exposure of his patient's most personal affairs in government records, become a criminal himself, or connive at criminal methods of his patient in securing useful remedies.

The group of addicts who are criminal, degenerate, and otherwise dangerous to society is a large and increasing one. It is a problem comparable in all essentials of cause, cure, and effect with that of similar groups who are not addicts. The important service physicians can render in its management is to assist in arriving at a fair diagnosis for each victim and to supply such intelligent relief from suffering as may be indicated. Whether even these derelicts should be universally punished by the customary routine prohibition of narcotics, in addition to their prison discomforts, may be open to debate. Otherwise these unfortunates must be treated as prisoners, and for this purpose a jail that is good enough for similar individuals who are not addicts is good enough for the drug user. Some states are noted for their elegant prisons, where comforts and living conditions for inmates rival those of average citizens. In some counties of California the jails are finer, better kept, and the "guests" better served than are the county hospitals and their patients.

### III

There is a real need for controlled convalescent service for one considerable group of addicts. Similar service is equally desirable for many other classes of defective and infirm citizens. Whether a state or county should concentrate these services in general institutions, camps, colonies, farms or what-not, or whether there should be a separate institution to meet such requirement, is a debatable question or at least a debated one. Certainly any change from present methods would be an improvement. We now have special "reconstruction," "vocational training," "rehabilitation," "convalescent," etc., institutions, camps, colonies, etc., for veterans of the World War, and other wars; the deaf, dumb and blind; the aged, crippled and defective; the mental aberrants; the tubercular; female prostitutes; convicts and other groups, still further divided into men, women, and children. Drug addicts undoubtedly are included in the population of all these institutions, and there are still other groups of problem citizens—potential addicts—awaiting public discovery.

It may be that more may be accomplished by making drug addiction one of the basic lines of division in group-

ing our problem citizens for the purpose of improved and economical assistance. At least the statement is non-controversial, that society has a definite obligation to give every handicapped citizen, including drug addicts, ample opportunity and such assistance as needed to "come back"; for the hopelessly insolvent, reasonable comfort, and for the criminal and otherwise dangerous, safe confinement.

*(To be concluded in the July issue)*

No other medical writer within our knowledge discusses certain phases of health with quite the utter frankness of Dr. Etta Rout of England. Her writings about contraceptive and abortifacient practices are familiar to many physicians and many others. Of her recent article (*Medical Journal and Record*, December 2, 1925), the *Therapeutic Gazette* says that she points out that the meanest man or woman has some appreciation of sexual pleasure, and prophylactics which lessen pleasure will never be popular, therefore will be of little use in preventing disease. For example, calomel ointment is unsuitable internally for women; it causes salivation and irritation. Greasy substances used beforehand are thoroughly disliked, as being messy and uncomfortable, reducing friction and destroying direct contact. She has tried out various kinds of suppositories for years, and found all of them unsatisfactory in different ways, usually because of stickiness or greasiness. For nearly two years she has been experimenting with different kinds of effervescent suppositories, and at last has attained success with a tablet which is being sent to Chicago as a prophylactic packet for women. Laboratory tests have shown that these prophylactic tablets will destroy the gonococci by contact in one minute; the weakest dilution of chinisol which kills the gonococci in one minute is one in four thousand, and the tablet gives approximately one to one thousand to one in two thousand, assuming an average amount of secretions. The tablet is stainless, odorless, tasteless, nonirritating, nongreasy, readily soluble in moisture but unaffected by heat. She is now satisfied something has been evolved which will be acceptable to ordinary men and women for use before connection, when it will protect both parties; and if used afterward only, it will help to protect women from infections in the genital passages. If it could be put on sale as frankly and simply as tooth paste or hair shampoo, fresh infections would certainly be largely reduced; and there is really no natural reason why prophylactics should not be sold as openly as toothbrushes. We have long since ceased to rely on dirt and disease as aids to sanctity; why then do some of us still wish to found sex morality on them?

In her study of social welfare clinics in Chicago she found that scarcely any of the men and none of the women had an adequate knowledge of prophylaxis, but they were all ready to listen to instruction and most of them anxious to acquire knowledge. One important feature was that the pimp brought in the prostitute he was running to see if she was free from disease, to learn how to keep her clean, and if found to be infected he arranged and paid for her continuous treatment. Thus the pimp has come to have a social value, as the medium through which medical supervision can be exercised where it is most needed. Women welfare workers are the most inexperienced as to the sex life of fair average collections of men and girls; and they almost entirely fail to realize the atom-sorting processes to which humanity responds, whereby some women inevitably become prostitutes, some free lovers, some conventional wives and mothers, some foster parents, some neuter workers, some perverts, and some apparently repeat in their adult life the embryonic race history of their ancestors from promiscuity to monogamy.

Rout asserts that the fundamental position is this, and till it is recognized no headway can be made: that the sexual possibilities of mankind are greater than the sexual requirements of permanent love and marriage. Therefore irregular intercourse is inevitable for imperfect humanity, and failure to make this irregular intercourse safe will result in making marriage the most dangerous of all our social institutions."

## - *The MONTH with the* EDITOR -

Notes, reflections, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

"I have weighed in a nice scrupulous balance whether it be better to serve men or be praised by them, and I prefer the former."

Thus Thomas Sydenham, the father of clinical medicine, answered his numerous detractors. Decision on this point every physician must make and upon that decision will rest the endurance of his name. The Immortal Sydenham upon being asked, by a young doctor, what to read to improve himself in medicine is said to have replied, "Read Don Quixote." Here we get another glimpse of the philosophy of one of the remarkable physicians of all time.

These and other gems are culled from a little fifty-page book on Thomas Sydenham, clinician, by Dr. David Reisman, recently published by Paul B. Hoeber, Inc.

Sydenham, Osler, and other physicians now among the Immortals, all caution against too narrow reading. Philosophy, logic, culture, intellectual poise, so essential to the useful physician in his daily contact with life awry, are not only secured but must be nourished by good reading, of which there is none better than the biographical briefs of a great physician. Reisman's little monograph on Sydenham is one of these. A postcard to advertisers in this edition will secure your copy, and you can read it during an hour of recreation.

Physicians who are interested in their own welfare and in the cause of medical progress should read the editorial (Journal A. M. A., May 8, p. 1458) on "The Incubus of the Harrison Narcotic Act" and the proposals for "strengthening" it on page 1478 of the same issue—AND ACT.

Further information about this type of bureaucratic control of the practice of medicine by tax collectors is discussed editorially in the May, June, and July issues of CALIFORNIA AND WESTERN MEDICINE.

A large department store in San Francisco recently gave countenance, space, and helpful propaganda to a representative of an outstanding health cultist.

One member of the San Francisco County Medical Society, George W. Hartman, wrote the management of the store a simple, dignified, nonlibelous protest. The management promptly showed interest and asked for evidence, which was furnished by the Department of Investigation of the American Medical Association. Result, this store will be more careful in the future.

When a department store dispenses or promotes shoddy goods pertaining to health, intelligent clients are apt to question their methods in the selection of more material things.

A dignified protest from a few doctors interested in human welfare against any of the numerous shoddy and shady health matters department stores are ever going deeper into would have a very wholesome effect.

The controversy going on in the secular and semi-scientific press as to whether crime is a disease or pure cussedness and whether it is a result of heredity or a consequence of environment would be amusing were it not the froth that obscures the vision of tragedy. Every physician knows, of course, that crime is not a social entity any more than headache is a disease entity. From the point of view of causes, manifestations or consequences, crime, like headache, is a symptom of many things. Crime may be the symptom of a disease; it may be pure cussedness; its soil may be prepared by heredity; it may be a logical sequence of environment; it often has

its roots in all of these, and frequently all of them are blameless.

We are considering crime today with about as much intelligence as the Greek physicians considered fever when they thought it was a disease and used artful arguments to show that all fevers were produced by one particular cause. A little more study of the evolution of medical knowledge and a little more reasoning from analogy and facts would eliminate over 90 per cent of the information (?) about crime now so extensively broadcasted. And even more to the point, it would lead to the avoidance of widespread and unbelievably stupid practices which are the vogue of the moment.

One hundred years ago Dr. Benjamin Rush, a signer of the Declaration of Independence, reported a case of rheumatism which he cured by removing a diseased tooth.—H. J. Jurgens, M.D., Quincy Medical Bulletin.

A great foundation had made a critical analysis of 17 plus thousand prescriptions collected haphazard from the files of prescription drug stores. They found that 10 per cent were for proprietary medicines, and about 50 per cent were so written as to call for the skill of an educated pharmacist to compound. The others called for simples or standard preparations from approved sources. This showing is better than many had thought it to be.

Books about sex continue to be produced with unabated fury. A few—very few—of them are worth reading; more are insipid, stupid; some are frankly intriguing and many are what some reviewers call bilge. Not being able to saturate decent people with homemade bilge, some publishers are putting out copies translated from other languages to meet the emotional demands of morons and unstable adolescents.

Every voter must register on or before July 31, 1926, or he will not be entitled to vote in the important forthcoming fall elections. Registrations previous to 1926 do not count. There must be a fresh registration this year on or before the date mentioned.

In view of the many important issues to be voted upon, physicians are urged to personally register and to acquaint their friends of these facts, asking them to use every means possible to get this message to all voters.

According to the League of Nations, infant births and deaths are both steadily decreasing throughout the civilized world. These facts apply in far countries—"backward countries"—as well as in those where medicine is practiced by government bureaus.

A post mortem is an audit of our work—the only audit we have on our own reasoning, diagnosing and treating of patients. Any doctor who does not want an autopsy is thought of with a slight suspicion of "Perhaps there is something that would better be never known." In the hospital world the number of autopsies is one criterion as to whether a hospital is good or bad. The best type of medical work is impossible without autopsies.—Queen's Hospital Bulletin.

Sir William Read, who in the early seventeen hundreds was classed as an advertising quack, who was knighted in 1705 and later served as oculist to the queen,

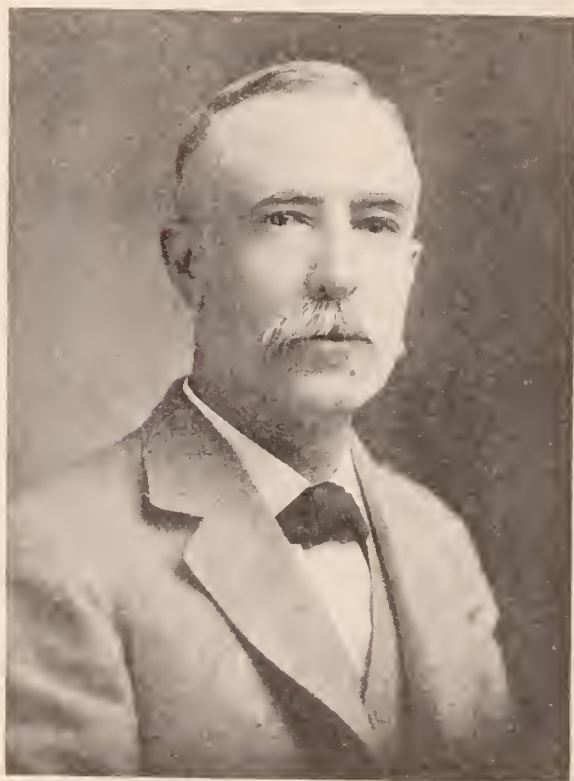


died in 1715. *His widow continued his practice.* Thus we have a precedent for several "new" customs of our day.

"Schenectady has reorganized the city public health nursing service so that there are now six districts with a nurse in each caring for all aspects of health nursing. Heretofore each nurse has been assigned to a special branch of health work covering the entire city."

There never was any other intelligent course.

Probably three-quarters of all doctors today are general practitioners, that is, physicians whose aim it is to recognize disease, to deal with all the more common maladies by advice and treatment, and to know when to refer patients to specialists. The general practitioner is at present facing many difficulties. The specialist tends to monopolize prestige and to receive relatively much larger fees. Laboratory and hospital facilities which the modern doctor ought to have are expensive and often inaccessible.—Annual Report, Rockefeller Foundation.



JAMES H. PARKINSON

Report of the Chairman of the Council—Members and guests at the recent session of the California Medical Association missed the geniality and directing ability of Dr. James H. Parkinson, so long chairman of the Council, who was compelled to be absent on account of illness.

Doctor Parkinson's excellent and complete report as chairman of the Council made a favorable impression, and had a strong influence in directing the affairs of organized medicine, as has his conduct throughout his long years of service.

A slight appreciation of this devoted service and the regret of the Association at the absence of one of its leaders was expressed in a resolution of the House of Delegates, that the "secretary express to Doctor Parkinson our regret and sorrow for his inability to be with us, and that she accompany this expression of regret with flowers.

Eva C. Reid of San Francisco displayed unusual courage for this day and age when she stated at the re-

cent convention of the California Federation of Women's Clubs that "what is needed to stop delinquency is the fear of certain punishment for wrongdoing. The sooner this is instilled in the minds of our children the better it will be for both the home and the state." Every now and then someone reiterates the fundamental importance of discipline in character building, and signs are not lacking that the days of the "shingle and the woodshed" may return.

Character is what a man is, not what reputation considers him. *Character is one's intrinsic value*, not his value in the market of public opinion. It is not learning; it is worth. "Character is greater than intellect. How many brilliant intellects about us are besmirched by faults and vices so gross that they have fallen from their high estate and now none so poor to do them reverence."—Rudolph Matas, New Orleans Medical and Surgical Journal, April, 1926.

Medical bootleggers seem to be learning a lesson from the other kind as to the ease and safety with which law may be disregarded. In the efforts of the Board of Medical Examiners to induce the San Francisco Telephone Company to carry only licensed physicians and surgeons in their classified list under this title, they have run across some remarkable opposition. One naturopath *insists* upon keeping his name in this classified list of physicians and surgeons, and insists, in spite of law and court decisions, that he has a right to keep it there and to practice surgery if he wants to.

He probably will.

#### California, Nevada, and Utah Doctors Publish Elsewhere:

(Note.—Members of the California, Nevada, and Utah Medical Associations are invited to supply the editor with reprints or marked copies of magazines containing their articles or very brief abstracts. All that we receive will be noted regularly in this space.—Editor.)

—Samuel A. Durr, M. D., San Diego, "The Operations for Glaucoma," Am. Journ. Ophth., March, 1926. In this article the better known operations for glaucoma are compared with reference to their relative value in different types of cases. The conclusions reached are based on a survey of the literature regarding the different procedures; they are as follows:

1. No one operation can be used in all cases.
2. Iridectomy is the operation of choice in acute glaucoma, together with preliminary posterior sclerotomy, or adrenalin, if needed. Trephining or iridotaxis is permissible.
3. The Elliot trephine should be used in chronic non-congestive glaucoma; especially with contracted fields iridotaxis may be done. Cyclodialysis may be tried first, reserving the trephine for resistant cases.
4. Iridectomy should be performed in glaucoma due to swelling of the lens.
5. Buphthalmus is best combated by trephining or repeated posterior sclerotomies.
6. Cyclodialysis should be used in glaucoma due to disease of the retinal vessels, and it may be done in patients who have chronic conjunctivitis.
7. Adrenalin is valuable in ophthalmoscopic examination as a therapeutic agent and as an aid to operation.

—P. K. Gilman, San Francisco, "Nitrous Oxid and Local Anesthesia in Abdominal Surgery," Am. Journ. Surg., January, 1926.

—Hazel E. Field, University of California, Publications in Physiology, the immediate effects of tobacco smoke on the activity of rats, in a preliminary experiment concludes:

"Experiments show that the immediate after-effect of smoking on the spontaneous activity of rats is a marked stimulation with the dosages and the type of tobacco so far used."

—E. B. Towne, M. D., San Francisco, "Roentgen-Ray

Treatment of Pituitary Tumors," Arch. Neurol. and Psychiat., January, 1926; "Invasion of the Intracranial Venous Sinuses by Meningioma (Dural Endothelioma)," Ann. Surg., March, 1926.

—A. J. Scott, Jr., M. D., and A. H. Zeiler, M. D., Los Angeles, "Congenital Cardiac Hypertrophy, Case Report," Am. Journ. Dis. Child, January, 1926.

—William Everett Musgrave, M. D., San Francisco, "Using Discretion While Bestowing Relief," Mod. Hosp., May, 1926.

—W. H. Manwaring, M. D., Ralph W. Wright, and Phil W. Shumaker, San Francisco, "The Relation of Anaphylaxis to Immunity," studied by passive sensitization in dogs, Journ. A. M. A., April 24, 1926.

The physician who is a specialist in infant feeding and who also promotes birth control carries the tradition that physicians constantly attempt to eliminate the need for their services too far.

Sweeping assertions that curative medicine will give way entirely to preventive measures and that the private practitioner will gradually yield his place to the salaried officer of health are both unfounded and harmful.—The Nation's Health, April, 1926.

Plastic Doctor Removes Grin from San Francisco Man, say display newspaper headlines. Why all this excitement about a common operation?

According to official figures smallpox continues to be a popular, stupid, filthy method of committing suicide in California. The practice among adults is likely to do much toward elevating the intelligence of future generations. The pity of it all is that the stupid adult fools who invite this disaster throw their dirty garbage on poor innocent children and incompetents.

"PHYSICIANS JOBLESS: STORK FAILS TO FLY"—Under headlines like these newspapers note that the falling birth rate in Germany is forcing obstetricians, and even midwives, into the "Dole Line."

The stork is still a healthy, active bird in Germany, but birth controllers are stealing her eggs before they hatch.

Periodic health examinations, as properly conducted on the basis of close personal relationship between the examiner and the examinee, are nothing more than an honest, conscientious practice of medicine by an individual upon an individual, and both co-operating to the end that the best health of the patient may be maintained.—Ohio State Medical Journal, May, 1926.

Are we destined to see the phrase "as inaccurate as the listings in the classified sections of telephone directories" come into general use? The Board of Medical Examiners deserve commendation for their efforts to induce the telephone companies to make such listings a little more accurate than they have been. The task, for some unexplained reason, seems to be a difficult one.

Careful estimates would indicate that properly qualified general practitioners of medicine, aided by moderate home laboratory facilities, will be able to make a correct diagnosis and give all necessary instruction and treatment to at least 80 per cent of all the people who seek his aid, while 20 per cent of specialists, including internists and general surgeons, all thoroughly educated and trained, will be ample in number to care for the sick who need highly specialized service. Furthermore, the same proportion will to a large extent hold true of those who require hospital and special laboratory service.—Wendell C. Phillips, Journal A. M. A.

## THE DOCTOR AND THE CHANGING ORDER

George E. Vincent, President of the Rockefeller Foundation, discussing this subject before the New York Academy of Medicine, November 19, 1925, said in part:

"Individualists have been described as people who cannot see the woods for the trees, and collectivists as folk for whom the forest obscures the single oaks, hemlocks, and beeches. The former think of life in terms of personal aims, rights and duties; the latter seem to regard community or nation or mankind as great organic entities of which men and women are hardly more than constituent elements, cells in a social body. The individualist naturally believes in freedom of the will; the collectivist tends toward determinism. Each theory pushed to an extreme deals with an abstraction: on the one hand an isolated person, on the other an impersonal unity. Both views have value; they are ways of approach to the bewildering complexity of life; they help one to analyze and simplify.

"Doctors may be looked at usefully either as individuals living their own personal lives, increasing their knowledge and power, demanding their rights, protecting their privileges, helping their fellows, or they may be regarded as servants of society, controlled, subordinated, even exploited for the common welfare. For obvious reasons doctors have been individualists. Until recently there has been no question of their being anything but independent and self-sufficient. Their services have been intimately personal. To them the world is quite obviously peopled by separate persons; no wonder the doctors see the trees instead of the forest.

"So long as society led the simple life of the countryside, village, and small town with diversified agriculture, cottage industries, local markets, slow transport, and leisurely spread of news; and so long as each doctor knew almost all there was to know of medicine and its arts, the relations of physicians to their communities presented few problems. Like the lawyer, merchant and school teacher, the doctor was an individualist, a self-sufficient, independent unit in close and neighborly contact with his patients.

"But society no sooner settles down to a routine of custom and habit than something happens. A conqueror invades the land, or more disturbing still, someone has a new upheaving idea which cannot be suppressed. Then the game of adjustment begins all over again. In prosperous, pioneer lands, this is called progress; in older disillusioned societies people are not sure that it is anything more than change. But whether it be headed straight for a millenium, or started on a slowly recurring spiral, or only doing another lap on a vicious circle, it disturbs the peace, raises problems and, worst of all, compels a few people to think, or at least to 'rearrange their prejudices.'

"Although the sick benefits of lodges, benevolent orders, labor unions, the voluntary health insurance schemes of Denmark and Norway and the compulsory systems of Germany and Great Britain cover very large groups of people, the medical service is rendered by contract or panel doctors, the vast majority of whom are general practitioners working in their own offices. There is little or nothing in the form of clinics. The medical care is probably, on the whole, inadequate and certainly unorganized. Commercial insurance companies which issue policies against sickness do not, for obvious reasons, offer organized medical service to their patrons. These persons resort to practitioners of their own choosing.

"It looks as if society means to insist upon a more efficient organization of medical service for all groups of people, upon distribution of the costs of sickness over large numbers of families and individuals, and upon making prevention of disease a controlling purpose. Just how these ends will be gained, only a very wise or very foolish man would venture to predict. One thing seems fairly certain: In the end society will have its way."

And if he, or anyone about whom he cares, does wrong, he ought of his own accord to go where he will immediately be punished; he will run to the judge, as he would to the physician, in order that the disease of injustice may not be rendered chronic and become the incurable cancer of the soul.—Plato.



## MEDICAL ECONOMICS AND PUBLIC HEALTH

The 1926 Hospital Number Journal A. M. A. contains the report of the Council of Medical Education and Hospitals which constitutes the most exhaustive and useful report of the hospitals of the United States ever issued.

The report is very much condensed, and much information of fundamental importance is contained in tabulated reports.

There are 6896 hospitals worthy of mention in the United States of all classes that are considered with 802,065 beds and 34,511 bassinets, constantly caring for an average of 629,362 patients.

New York, with a population of 11,000,000 plus, has 630 hospi-

tals with 120,092 beds. Pennsylvania, with a population of 9,000,000 plus, has 416 hospitals with 67,984 beds. Illinois, with a population of 7,000,000 minus, has 380 hospitals with 57,784 beds. California, with a population of 4,000,000 plus, has 490 hospitals with 49,502 beds. Utah, with a population of 492,000 plus, has 38 hospitals with 2305 beds. Nevada, with a population of 77,000 plus, has 25 hospitals with 955 beds.

California, although holding eighth place in population, is second in the number of hospitals and fourth in the number of hospital beds.

"The ratio of beds to population in New York is one to 96.9; Pennsylvania, 143.6; Illinois, 126.7; California, 84.9," and for the United States one bed to 141.5 population. California appears to be the most thoroughly hospitalized state, and it has a high percentage of good hospitals.

"Several hospitals that are reputed to be flagrantly unethical or to be harboring immoral or unqualified practitioners have been omitted from the list." Some of these, we regret to notice, are in California.

"THE PUBLIC SCHOOL PROTECTIVE LEAGUE"—This is from the letterhead of an organization that solicits funds for the purpose of opposing vaccination and other scientific medical policies. They designate vaccination in Los Angeles as "A Modern Inquisition."

The House of Delegates, A. M. A., passed the following significant resolutions:

WHEREAS, The strength of the medical profession in the

field of legislation is lessened by lack of uniformity in policies and methods; and

WHEREAS, Such uniformity can be promoted and established only through co-operation among the several state associations whereby each will have the benefit of the knowledge and experience of all others; and

WHEREAS, Such co-operation can be best established through the Board of Trustees, acting through the Bureau of Legal Medicine and Legislation; be it

RESOLVED, That every state association be urged to co-operate to the fullest possible extent with the Board of Trustees in all matters of legislation, state and national; and be it further

RESOLVED, That the Board of Trustees be requested to extend to every state association all such assistance as may be possible in defining and carrying into effect its legislative policies, and in promoting uniformity in them.

Failing to secure their entrée into the hospitals and other established medical agencies of California, cultists of various sorts have found their opening in establishing clinics, health centers and such like of their own wherever they can get sufficient support. We may expect to see competing osteopathic, chiropractic, naturopathic, and scores of other varieties of near medical organizations established on opposite corners of the same street, like oil and gas service stations of different firms.

Like most uplifters, these cultists find their easiest victims among helpless children of our communities, and they now have "preschool" clinics. At a recent meeting during "National Child Welfare Week" an official of the State Board of Health in addressing an osteopathic meeting outlined the function of this preschool work, and stated that "when defects were found the children were referred back to their family physicians" (which is more than some of the other uplifters do), and continuing remarked "when I say 'medical profession' I am using it in the broad sense of one who is licensed by the State of California, for that is the way we use it now."

Who are "we"?

The title of the new Webb-Loomis Medical Practice Act should be changed to read: A bill to require standards for graduates in Medicine and to give special privileges to certain unqualified practitioners.—Boston M. and S. Journal, April 22, 1926.

"College of Fine Forces"—This is a new one, even for California. All we know about it so far is contained in the following extract from a letter from the Board of Medical Examiners to Hon. Frank Jordan, Secretary of State, Sacramento:

"We have before us a verbatim copy of a diploma issued by the 'College of Fine Forces,' dated January 3, 1900, under the name of Agnes B. Willcox, conferring upon her the 'Honorable Title of D. M. Doctor of Magnetics,' whereupon appears the seal and a statement 'Chartered under the Laws of California.'"

For some years now California has been held up to ridicule throughout the civilized world because any three persons can charter a university or any other alleged institution for higher learning and award any sort of a degree they please by paying a fee of a few dollars to the state for incorporation papers. California is rapidly becoming recognized as the home of fake educational institutions.

That the health of the people has survived under these conditions speaks volumes for what God did for California.

There may be others as versatile as Mr. Ford, but there are few who have the funds to popularize their theories and opinions on so many subjects.

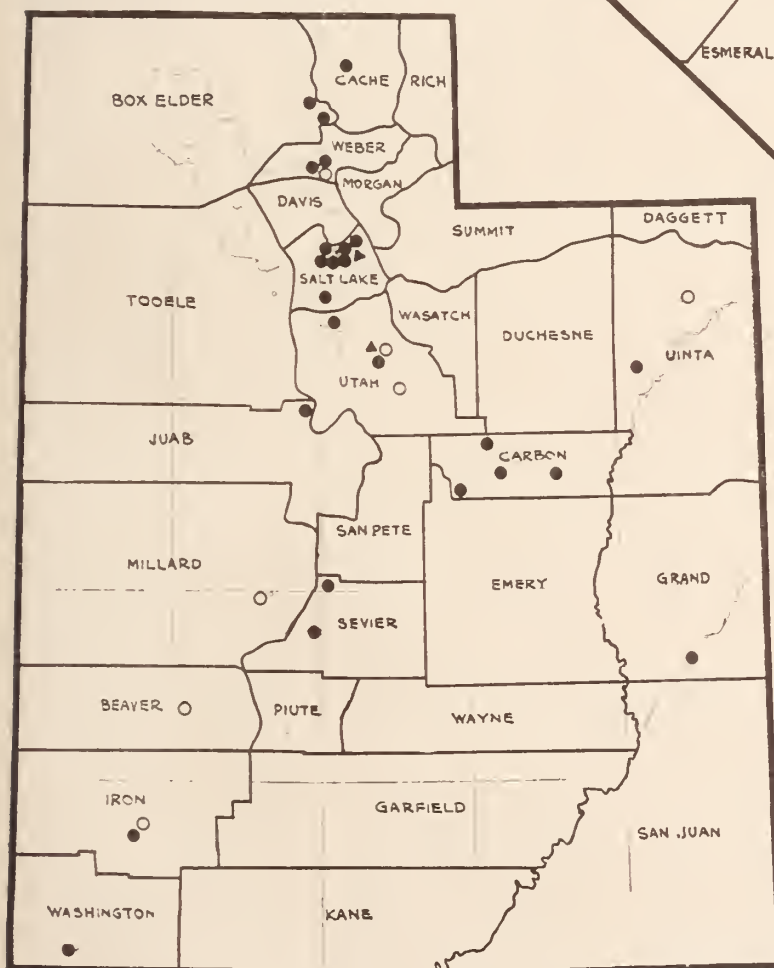
While Mr. Ford's outstanding success in certain lines entitles his utterances upon subjects within the field of his successes to a certain amount of respect, it does not



necessarily follow that his opinions upon other matters are of great value. In fact, expensive tests have shown many of his theories to be unsound, and in none more conspicuously so than his venturings into the practice of medicine.

His hospital was conceived and put into operation along what the public were led to believe to be original lines. After sinking staggering sums in this experiment, his policies have had to undergo extensive re-vamping.

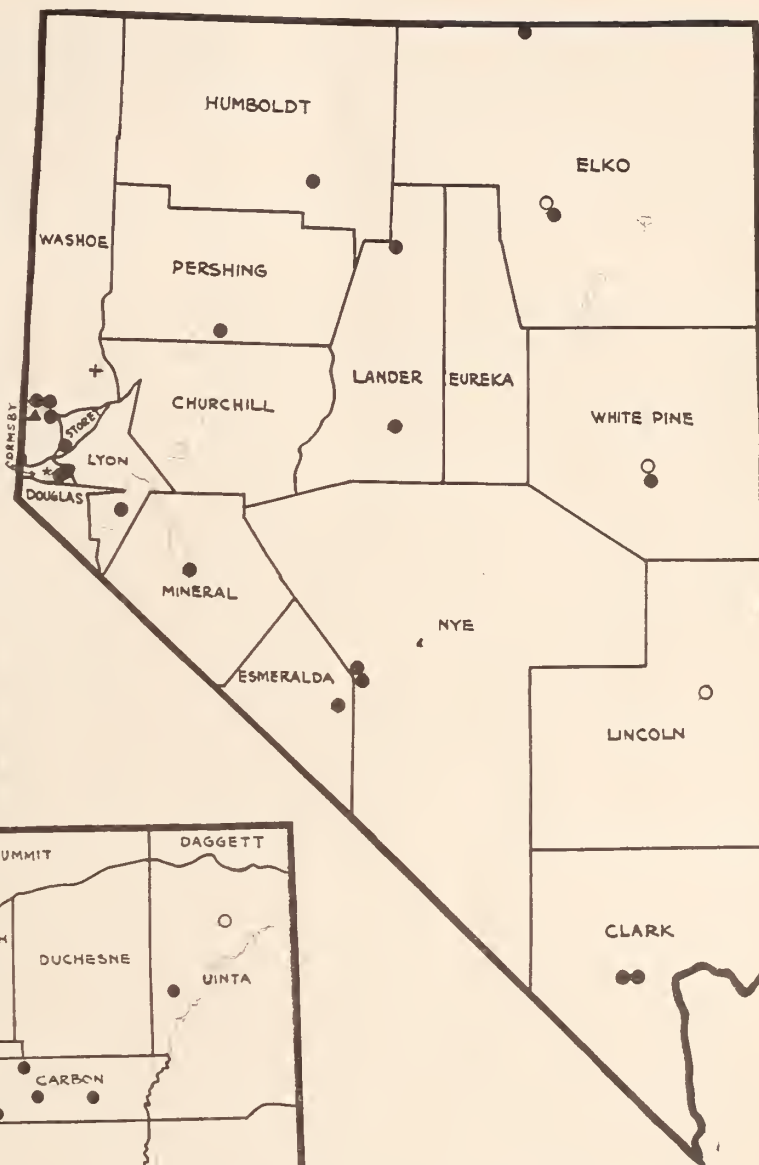
One of his latest expert medical opinions is being interpreted as an attack upon the value of milk as a food. "I don't believe in drinking milk for anybody over 8 years old," says Ford. Well, what of it? Ford is entitled to his beliefs, but of what use are they as interpretations of health values? None, of course, but whether or not the financial wizard so intended his statement, the consequences, this and others, of his alleged utterances will have a far reaching and pernicious influence upon millions of people who were beginning to feel confidence in the scientific value of milk as a food, particularly for children, as is an important factor in health education.



Men like Mr. Ford, whose every utterance is a front-page story, should use greater care than many of them do in discussing subjects about which they can have little knowledge.

Among the courses offered at the summer session of the University of California is one to be conducted in optometry by a professor from the East.

In this course it is proposed to "disclose the associa-



tion of visual defects with the health of the child"; to prepare teachers to recognize the "signs and symptoms" of eye troubles to the end that "the teacher or school nurse will become acquainted with means of detection of faulty habits of vision."

The resolution of the British Medical Association relating to signed medical articles in the public press which caused such a storm in newspaper circles, reads:

"From time to time there are discussed in the lay papers topics which have relation both to medical science and policy and to the health and welfare of the public, and it may be legitimate, or even advisable, that medical practitioners who can speak with authority on the question at issue should contribute to such discussions. But practitioners who take this action ought to make it a condition of publication that laudatory editorial comments or headlines relating to the contributor's professional status or experience should not be permitted; that his address or photograph shall not be published and that there shall be no unnecessary display of his medical qualifications and



appointments. There is a special claim that practitioners of established position and authority shall observe these conditions, for their example must necessarily influence the action of their less recognized colleagues. Discussions in the lay press on disputed points of pathology or treatment should be avoided by practitioners; such issues find their appropriate opportunity in the professional societies and the medical journals."—Journal A. M. A.

A clear, conservative, dignified, statement of what every physician knows in his heart to be true.

The opticians of England recently attempted to secure legislation similar to that abolished for optometrists not long ago in California, by which the physician's rights to practice as an oculist would be greatly restricted unless he also secured the approval of a board of technicians.

In refusing the application, Mr. Austin Chamberlain, Minister of Health, made among others the interesting statement that "the bill as drafted would debar physicians from treating defects of vision." This was perhaps not an insuperable difficulty, but he doubted whether any amendment that would remove it would leave the bill in a form acceptable to the opticians. But the whole difficulty was that defect of vision might be due to simple errors of construction in the eye itself which can be corrected mechanically by glasses; to disease in the eye needing treatment apart from the provision of glasses; or diseases not localized in the eye but due to a pathological condition in the body. If a case was not rightly classified, very serious injury to the patient might ensue. He was also not satisfied that the optical board, proposed in the schedule to their bill, would secure the qualification only of persons competent to recognize disease, and he pointed out that eighteen of the twenty-five members of the proposed board were to be opticians. It was not possible to argue from conditions in one country to those in another. Conditions in the dominions were entirely different. There were vast territories with relatively small and widely scattered populations that could not all be served by physicians. He admitted that he had some sympathy with their claim that persons who had properly qualified themselves to treat errors of refraction not requiring medical attention should have a special label, and he would like to meet this point. *The difficulty out of which he could not see his way was how patients suffering from simple errors of refraction could be distinguished from those in whom defect of vision was due to some pathologic condition.*

No such distinction can be made by one with less than a medical education, and yet such alleged instruction is being given to technicians by the department of physics of our great state university, and teachers are being thus taught in summer session courses.

**Sugarman Clinical Laboratory**—By inadvertence an article in our last issue may have given to our readers the erroneous impression that Mr. Edward I. Sugarman, former member of Lippman & Sugarman Clinical Laboratory, had retired from business.

It was not our intention to convey such an impression. Mr. Sugarman has opened a fully equipped clinical laboratory in the Physicians Building at Sutter and Powell streets, San Francisco, where under certification from the State Board of Health, he is engaged in rendering laboratory service. In a card to the profession, Mr. Sugarman places at their disposal, anew, his twelve years of continuous and successful practical experience in this field, and promises accurate and prompt attention to all matters which may by the profession be referred to his care.

A market milk-scoring contest was conducted recently in San Francisco by the State Department of Agriculture. According to a report to the City Health Officer, samples of milk were taken from the wagons of every distributor, and a result of the bacteriological and chemical analysis of the samples, together with the bacterial and clinical analysis of those samples taken by the inspectors during the last four months, formed the basis for

a rating of 96.4 per cent for the milk supply of the city. The previous score was 96.1 per cent. Every distributor had a rating in excess of 90 per cent. Twenty-four of the twenty-six distributors had a mark in excess of 92 per cent; the highest mark attained was 98 plus.

The basic Medical Practice Act now in force in Wisconsin defines disease as including "any pain, injury, deformity or physical or mental illness or departure from complete health and proper condition of the human body or any of its parts."—San Diego Bulletin.

**One of a Doctor's Problems** is the collection of his unpaid accounts. Beginning with the May issue, and continuing throughout the year, CALIFORNIA AND WESTERN MEDICINE carries in its advertising pages the announcement of the Roloff Mercantile Agency, who come to us well sponsored and highly recommended for this service. We will be glad to hear from readers at any time as to the effectiveness with which our new co-operators serve them.

Philip B. Matz, with the co-operation of a group of competent pathologists, has prepared a pamphlet dealing as far as feasible with standardized clinical laboratory procedures of the Wassermann test. The effort has been approved by E. O. Crossman, Medical Director of the United States Veterans' Bureau and issued as their bulletin number ten.

Here are some interesting extracts from discussions at the last annual session of the American Public Health Associations:

Francis E. Fronczak, M.D., Dr. Sc. P.H., opened the discussion by saying:

"Health departments are justified to a very considerable degree in extending the so-called free service, and can do so without doing any material harm to anyone whose work is limited to the field of cure."

Is any physician's work "limited to the field of cure"? How any man entitled to write M.D. after his name can be guilty of publishing such balderdash is hard to comprehend.

"A thorough examination should be made yearly of all persons, not only children but adults, and almost invariably some physical or mental defect will be found. This physical examination should be extended by health departments."

There you have it. Periodic examinations and consequently the most difficult phase of private practice—the diagnosis—should be made by a public health officer and then those needing treatment, which the doctor admits is practically all of them, may be handed over to the "cure" doctor. So this discussant adds the naïve statement that such practice is calculated to cement closer co-operation between licensed doctors and public health officers.

"There is every indication that the trend of the public health movement is even now toward the safeguarding of health through measures that may be applied directly to the individual."

There you have it again. There is no longer any doubt but that a militant group of public health officers are out to gain control of the practice of medicine by serving the individual directly.

"The conclusion is quite generally accepted that health departments are justified in extending their services by advocating and instituting periodic health examinations for adults. In such service they aid, rather than encroach upon the field of cure."

Such a conclusion may be "generally accepted" among public health officers, but the vast majority of physicians believe it to be not in the interests of health progress.

After a lot more of the same type of logic (?), including a discussion as to whether or not the time was opportune for public health departments to begin charging small fees for their practice among individuals, we read a refreshing message:

"I take it that it is not the function of a govern-

mental department to compel an individual to take care of himself. It is its function to prevent one person from being imposed upon by another. On the one hand, we should not go into preventive medicine wherever the patient is able to go to his own physician, but we should go into preventive medicine and curative medicine for every person who is unable to pay, and we should give it free because it is a government service."

For more of this enlightening discussion, see *American Journal of Public Health*, April, 1926, pp. 370-74.

One of the most valuable and interesting features of the Oakland meeting of the California Medical Association was the commercial exhibits of many of the advertisers in *CALIFORNIA AND WESTERN MEDICINE*. A more detailed story about these exhibits will be published in the July issue.

**Benign and Curable Form of Hemorrhagic Nephritis**—Fourteen cases of a benign focal type of hemorrhagic nephritis have been studied by George Baehr, New York. The disease occurs most commonly in young adults and is characterized by a hematuria, usually macroscopic, which may be painless. Unlike the common form of the acute diffuse disease, there are usually no constitutional symptoms. Neither edema nor hypertension develops at any time during the course. The hematuria may be persistent or recurrent in the form of brief attacks. In most instances a definite focus of chronic infection can be discovered, usually in the tonsil. The elimination of such a focus, for example, by tonsillectomy, frequently results in a temporary but pronounced increase in the hematuria, followed by gradual but complete disappearance of red blood-cells from the urine. Many of the cases are at first considered examples of hematuria due to surgical conditions in the genito-urinary tract. Some, Baehr thinks, have undoubtedly masqueraded in the past under the general term "essential hematuria." There are two types of the disease, the recurrent and the persistent, which differ from each other both in their mode of onset and in their course. Aside from the macroscopic hematuria, the urine otherwise presents few changes. Besides the hematuria, and in some patients slight lumbar pain, there are few conspicuous symptoms. Sore throat usually precedes the onset of the hematuria in the recurrent type of the disease, whereas in the more chronic persistent cases there may be little or no discomfort. Examination of the throat reveals in most instances chronically diseased tonsils, which may or may not be hypertrophied. On pressure, purulent material can usually be expressed from one or both tonsils. The blood pressure always remains normal. Edema has never occurred in any of the patients. Chemical examination of the blood has regularly revealed only normal findings. None of the patients have shown an appreciable anemia. The phenolsulphonphthalein, the indigo carmine, the Mosenthal and other renal function tests have all been normal. In the acute recurrent cases which have been preceded by a diffuse redness of pharynx and tonsils, streptococci may regularly be found in smears and cultures from the throat, but no work has yet been done to ascertain definitely whether they have any causative relation to the condition. Nor have the organisms been studied serologically in order to ascertain whether they fall into a common group. In the persistent types of the disease, smears and cultures from the purulent material expressed from the tonsils either before or after tonsillectomy usually show the presence of an an-hemolytic streptococcus. Eight of the author's cases have been studied by ureteral catheterization and renal function tests. The hematuria was found in all instances to be bilateral. The prognosis is excellent.

The patient of the future, in view of his perfected health education, may be expected to derive from it a wise judgment which will lead him to seek the continued advice and counsel of his personal physician. Furthermore, in view of our perfected system of individual and community health education, cults and other menaces to public health, all of which are founded on theories for the most part baseless and futile, will gradually disappear before the rising sun of enlightened public opinion.—Wendell C. Phillips, *Journal A. M. A.*

## CALIFORNIA MEDICAL ASSOCIATION

W. T. McARTHUR, M. D., ..... President  
PERCY T. PHILLIPS, M. D., ..... President-Elect  
EMMA W. POPE, M. D., San Francisco, ..... Secretary and Associate Editor for California

The action taken by the Council of the California Medical Association at its meeting at Long Beach held November 8, 1924, whereby three clinical prizes were established in the sums of \$100, \$75, and \$50 was rescinded at the May, 1925, meeting at Yosemite and two prizes of \$150 each were substituted, one for a paper on original research and one for a paper on a clinical subject.

The first chairman of the Clinical Prize Committee, Albion Walter Hewlett, by reason of serious illness was unable to take any action whatever. His successor, Walter C. Alvarez, together with the other members of the committee, Dudley Fulton of Los Angeles and Fred Fairchild of Woodland, formulated the rules governing the contest which were published in the December, 1925, issue of *CALIFORNIA AND WESTERN MEDICINE*.

The time remaining was too short for original research, and the number of such papers submitted was consequently limited. Upon Alvarez' resignation as chairman, due to his removal to Rochester, Dudley Fulton became chairman and Fairchild and George Dock of Pasadena the other members of the committee.

The final report of this committee presented at the 159th meeting of the Council awarded to Emil Bogen of Los Angeles the clinical prize of \$150 for his essay entitled "Arachnidism, A Study of Spider Poisoning." No cash prize for original research was awarded. Of the papers submitted, that by Albert H. Rowe and Hobart Rogers entitled "A Study of Carbohydrate Tolerance in Normals and Nondiabetics" was awarded honorable mention.

The Council has ruled that this committee be continued and that similar prizes be awarded at the meeting in 1927. This information is furnished now that those who desire to compete may have the full year in which to gather together material for their essays.

### MINUTES OF THE HOUSE OF DELEGATES, FIFTY-FIFTH ANNUAL SESSION OF THE CALIFORNIA MEDICAL ASSOCIATION. FIRST SESSION

Held in the ballroom, Hotel Oakland, Oakland, California, Wednesday, April 28, 1926, at 8 p. m.

**Call to Order**—The meeting was called to order by the president, Edward N. Ewer of Oakland.

**Roll Call**—The secretary called the roll; seventy-five (75) delegates were seated, and the president declared a quorum present.

**Report of the Council**—The president spoke of the illness of Dr. James H. Parkinson of Sacramento, chairman of the Council, and stated that the report of the Council would be presented by Dr. Morton R. Gibbons of San Francisco, acting chairman of the Council. Doctor Gibbons thereupon submitted the following report:

#### Death of Doctor Edwards

The Council and the Association as a whole sustained a



most serious loss in the death of Doctor Edwards, which occurred at Salinas on December 27, 1925. The Doctor had been a member of the Association from 1903 and of the Council from 1904, serving continuously, including his year as president. As a member of the Council, he was a most active worker and faithful attendant. He was always independent in his opinions or decisions, having one rule and guide—the best interests of the Association. His death came quite suddenly while apparently in good health, one moment enjoying life with familiar friends, the next at rest eternally. Surely a just reward for one whose public and private life seems always to have been guided by the highest ideals. His place will be hard to fill for, while many seem willing to work, there are but few who, in season or out, are on hand when the roll is called.

### Meetings

The Council has held two regular meetings during the year; the daily sessions during the annual meeting not included. Two open meetings were held in connection with Industrial Medicine, one in Los Angeles and one in San Francisco.

The executive committee has held eight meetings with an average attendance of seven out of nine.

### Council Meetings from May, 1925, to April, 1926

Annual meeting, May 17, 18, 19, 20, 21, 1925—5 Sessions  
Fall meeting, September 26, 1925.....2 Sessions  
Spring Meeting, January 30, 1926.....2 Sessions  
Nine sessions in all.

### Office of the Society

There has been one change during the year in the office staff. The business of the Society has been satisfactorily transacted and, as far as the Council is aware, with the general approval of the membership.

It seems best to include in this report, and to present each year, certain tabulations which more graphically indicate conditions than is possible by any description. The following table shows the growth of the Society for the ten-year period—1916 to 1925, inclusive, as of December 31:

Year.....	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925
Membership.....	2602	2699	2534	2496	3136	3484	3666	3809	3945	4138

### The Journal

CALIFORNIA AND WESTERN MEDICINE has been further improved during the year, and meets with favorable commendation at home and abroad. The difficulty of promptly and adequately handling the large number of excellent papers submitted for publication is still to be satisfactorily solved. The Council has made some recommendations that, if adopted, may be helpful in this direction. Doctor Musgrave, who takes a warm personal interest in the Journal, continues to serve without remuneration.

The following is a recapitulation of Journal conditions from 1919 to 1925, inclusive:

Year.....	Yearly Pages Reading.....	Yearly Pages Advertising.....	\$2 C. M. A. Dues.....	Miscellaneous Receipts.....	Disbursements.....	Yearly Profit.....	Yearly Loss.....
1919	446	576		\$11,011.99	\$11,472.89		\$ 460.90
1920	430	624		14,015.41	13,561.96	\$ 453.45	
1921	492	720		15,917.82	19,614.10		3,696.28
1922	468	768		18,202.91	21,877.21		3,674.30
1923	542	816		20,933.40	22,791.29		1,857.89
1924	720	816	\$7,812	23,200.37	28,997.49	2,014.88	
1925	784	821	8,142	34,854.06	35,981.68	7,014.88	

### Financial Condition of the Society

The financial condition of the Society is on a sound basis. The treasury shows a cash balance of \$31,712.16 as of December 31, 1925. The books and accounts of the Society were audited by Mr. Hugh Ross, public accountant, and according to his report on file were found correct. All claims are audited by the auditing committee, the bills ok'd by that member of the staff responsible for them. The voucher is then approved by the secretary,

signed by the auditing committee and countersigned by the chairman of the Council and the secretary.

### Annual Assessment

The Council cannot go on record as in favor of a reduction in dues until the question of expenses is more definitely settled. The number of suits now on file is fifty-three with nine claims. This clamor for reduction of dues by small amounts is under any circumstances difficult to understand. There was a time when such a question and such amounts might be considered, but with expenditures nowadays, it hardly seems a fair contention. If the Journal could positively be made self-supporting and pay all its expenses in which should be included an editorial salary, it might seem reasonable, but with an unsalaried editor, unfinished medical defense, the plan or prospect of owning a central convention home for our State Medical Society, as well as the possibility of needing funds to have a new medical law passed through initiative vote of the citizens, this is not the time to quibble about \$2 or \$3. The Council, therefore, recommends that the dues for 1927 be set at \$10.

The following is a recapitulation in condensed form of the finances of the Society from 1919 to 1925, inclusive, as of December 31, each year:

### RECEIPTS

Year	Amt. Dues	No. of Mem- bers	Society Dues	Journal Earnings	Misc. C. M. A.	Total Receipts
1919	\$ 7	2496	\$17,262.00	\$11,011.99	\$ 681.36	\$28,955.35
1920	7	3136	21,782.25	14,015.41	909.29	36,706.95
1921	8	3484	24,104.50	15,917.82	1,006.57	41,028.89
1922	8	3666	29,000.00	18,202.91	795.26	47,998.67
1923	10	3809	37,594.00	20,933.40	1,421.69	59,949.09
1924	10	3945	39,158.00	23,200.37	875.86	63,234.73
1925	10	4138	32,562.50	34,854.06	790.64	76,349.70
1925	10	4138	40,705.00	34,854.06	790.64	76,349.70

### DISBURSEMENTS

Year	C. M. A. General Expense	Journal	Legal	Total	Cash On hand Dec. 31
1919	\$ 6,543.22	\$11,472.89	\$ 9,294.36	\$27,310.47	\$ 6,740.83
1920	8,531.68	13,561.96	9,784.23	31,877.87	11,469.91
1921	9,018.28	19,614.10	17,839.82	46,472.20	6,126.60
1922	6,808.86	21,877.21	21,425.19	50,111.26	4,219.01
1923	4,543.57	22,791.29	22,243.42	49,578.28	14,589.82
1924	7,390.64	28,997.49	22,396.31	58,784.44	19,040.11
1925	7,619.34	35,981.68	20,076.63	63,677.65	31,712.16

### Optional Medical Defense

Optional Medical Defense, inaugurated by the Council under instructions from the House of Delegates, went into effect July 1, 1924, for 163 members; on April 1, 1926, the number subscribing was 550. There should be at least 1000 members to afford a sufficient margin of safety. It is, however, gratifying to note that an increase is being shown and, when the doctor finally decides what suits of this character really mean to him, the increase will be more rapid. Seven suits have been filed against members and there are seven cases pending.

### Excessive Fees

It seems proper at this point to dwell briefly upon what our legal staff believes is a frequent inciter of suits, namely, excessive fees, both medical and surgical. These, with a growing tendency to commercialism on the part of some members of the profession, are definitely believed to be inciting factors. It is a question that is not one-sided by any means. Modern medicine has placed at our disposal agencies for investigation and diagnosis that are often indispensable. Of these the x-ray may be taken as a type. Then there is laboratory work in greater or less degree that must be called upon more frequently. These charges often form a quite considerable part of the ordinary bill. The remedy here, and indeed the proper procedure, is, as Dr. Frank Billings says, to use them only in that percentage of cases where they are absolutely necessary.

On the other hand, we have a self-instructed public feeling that it has not been thoroughly examined unless a considerable amount of this work has been done. The charge is frequently made against hospitals that this type of work is a routine procedure to the supposed profit of the hospital and the financial pain of the patient. A frank statement beforehand in relation to this work and

its probable cost with a limitation to actual necessity will largely help to eliminate this grievance.

There remain, however, many instances of fees, surgical and medical, that the majority of the profession feels is out of all proportion to the services rendered. There never has been and there never can be a fee bill which is absolutely binding. Special skill and wide experience in particular lines of work, whose presence or absence will often mean success or failure, must be valued accordingly. The principle generally adopted by the legal profession that increased responsibility demands increased remuneration seems to be a fair one, especially where financial considerations can certainly be no object. The Council believes the time is opportune for the Association to go on record on the question, in other words, to state formally and as a matter of record that which is not only the opinion, but also the practice of the great majority of the profession.

### Financial Impositions Upon the Profession

There have been no new developments in the income tax situation or in the Harrison narcotic license fee. The committee appointed by the Council last year has continued its activity in an effort to obtain for the profession simple justice in these matters.

**Two Dollar California Annual Tax**—The Two Dollar Annual Tax on all licensed physicians for the California State Board of Medical Examiners has been under consideration by the Council and, at its 144th meeting, the League was authorized to introduce a bill repealing the tax. At the 74th meeting of the executive committee all action to repeal was, for the present, deferred. It is assumed that the tax went into effect as of January, 1918. The membership of the Society as of January 1, 1918, has been taken for that year. On this basis a total of \$46,140 has been assessed and collected from our members to go into the state treasury.

The Council recommends that the matter receive special attention at the next session of the legislature. It has become fashionable to add these annual imposts upon the pretense of a supervisory regulation by many of the Boards and Commissions. This contention has no merit except on a revenue basis, and from the large amount of money now to the credit of the Board of Examiners, it is evidently not needed.

### Proposed Amendments to the Constitution and By-Laws

The following amendments to the Constitution and By-Laws are recommended for adoption:

Amend Constitution, Article VI, Section 1, to read as follows:

#### Officers

Section 1. The officers of this Association shall be a president, a president-elect, a vice-president, a *Speaker* and *Vice-Speaker of the House of Delegates*, and fifteen Councilors, of whom one shall be elected from each of the nine Councilor districts and six at large, two of whom shall be elected from the County of Los Angeles, and four from the remainder of the state. Not more than three Councilors shall be elected from any one Councilor district. These officers shall be elected by the House of Delegates at the time and in the manner provided in this Constitution and By-Laws.

Amend Constitution, Article VI, Section 3, to read as follows:

#### Officers

Section 3. The Association shall elect a president for the next succeeding year who shall remain president-elect for one year preceding his assumption of the office of president. While president-elect, he shall be ex-officio a member of the Council and of all other bodies and committees of which the President is an ex-officio member. *The Speaker and Vice-Speaker who may or may not be members of the House of Delegates shall be elected for the term of one year, commencing on the adjournment of the annual meeting at which elected.*

Amend Constitution, Article VII, to read as follows:

#### Council

The Council shall consist of the elected Councilors and ex-officio the president, the president-elect, the vice-president, *the Speaker, and the Vice-Speaker of the House of Delegates*. Besides its duties mentioned in the By-Laws, it shall constitute the Finance Committee of the House of Delegates. Five Councilors shall constitute a quorum.

Amend By-Laws, Chapter III, by the addition of Section 9, reading:

Section 9. The speaker of the house or in the absence of such officer, the chairman of the Council, prior to each annual session shall appoint a credentials committee, consisting of two members of the house of delegates and the society secretary ex-officio. The function of this committee shall be to register and to pass on the credentials of all members of the House of Delegates, and submit to the House of Delegates a written report or reports, giving the names of all members eligible thereto. Provided, however, that the members seated by the committee shall have the right through a two-thirds vote to amend the report or reports of the credentials committee.

Amend By-Laws, Chapter III, by the addition of Section 10, reading:

Section 10. No delegate or alternate whose name has not been certificated in writing as such, by his county unit, through the president and secretary, and filed in the office of the state secretary at least fifteen days subsequent to the first of March shall be entitled to a seat in the House of Delegates. The state secretary shall notify each delegate of his election and forward certificate credentials with notice of councilor's rulings governing election and penalty for non-attendance; and no delegate absent without prior notification to his county secretary or secretary of this Association shall be eligible to a seat in the House of Delegates the following year; and it shall be the duty of the secretary to mail a list of all absent delegates to the proper county units.

Amend By-Laws, Chapter IV, as follows:

Renumber section 3 as section 4.

Renumber section 4 as section 5.

Add new section number 3, reading as follows:

Section 3. The speaker shall preside at the meetings of the House of Delegates and shall perform such duties as custom and parliamentary usage require. He shall have the right to vote only when his vote shall be the deciding vote. The vice-speaker shall officiate for the speaker in the latter's absence or at his request. In case of death, resignation, or removal of the speaker, the vice-speaker shall officiate during the unexpired term.

Amend By-Laws, Chapter V, Section 13, by the addition of the words "the executive committee" after the word Council in line 7 of said section, which would then read:

Section 13. The Council shall appoint an attorney-at-law in good standing, practicing his profession in the northern section of California, to act as general attorney for the Association, and an attorney practicing his profession in the southern section of California to act as assistant general attorney. The general attorney shall, so far as possible, attend the sessions of the Council, *the executive committee*, and of the House of Delegates and shall generally advise and counsel with the councilors and officers of the Association. The general attorney or assistant general attorney shall have charge of all actions for malpractice against individual members of the Association on behalf of such members whenever their defense is authorized by the Association, through the Council, the executive committee or the secretary thereof.

Amend By-Laws, Chapter V, Section 15, by the elimination of the words "and the general attorney," which would then read:

Section 15. The executive committee of the Council shall consist of the president, the president-elect, the vice-president of the Association, the chairman of the Council, the chairman of the auditing committee, the secretary and



the editor. . . . The committee shall elect its own chairman, and the secretary shall act as secretary thereof. It shall keep a record of its proceedings and report them to the Council, and all of its proceedings shall be subject to the approval of the Council.

Amend By-Laws, Chapter VI, to read as follows:

#### Order of Procedure

The committee on scientific program shall consist of the secretary of the state Association, the editor, the secretaries of the sections on general surgery and general medicine, and three others to be elected by the House of Delegates for a term of three years, one being elected each year. The secretary of the Association shall be the chairman thereof. It shall determine the character and scope of the scientific proceedings of the Association, subject to the instructions of the Council.

Amend Chapter VII, Section 8 of the By-Laws, to read as follows:

Section 8. A physician who states he has his major office for professional practice in one county, even though his legal home or residence may be in some other county, may have the option of joining or maintaining his membership in the county medical society of the county in which he has his major office for professional work, or in the county medical society in which he has his legal home or residence.

#### Medical Officers' Reserve Corps

The following letter from Colonel Munson is self-explanatory:

"Your letter was referred to the Surgeon-General, and the reply from his office gives the status, as of March 15, 1926, as follows:

Requirements, by numbers:	
Medical Reserve Corps .....	32,000
Dental Reserve Corps .....	5,200
Veterinary Reserve Corps .....	2,800
Sanitary and Medical Administrative Reserve Corps .....	4,200
	<hr/> 44,200

Enrollments, by percentage:

	Per cent
Medical Reserve Corps .....	31
Dental Reserve Corps .....	80
Veterinary Reserve Corps .....	37
Sanitary and Medical Administrative Corps .....	46

"On the basis of physicians licensed to practice in California, 7549, less than half the quota for this state has been so far enrolled. There remains 634 Medical Reserve Officers lacking from California. Full information as to the internal situation in California has been furnished Colonel J. Wilson Shiels, Medical Reserve, who I understand will discuss this phase, as chairman of the Military Committee, at the coming convention."

The speakers at the Second General Session in the ballroom, Thursday, April 29, at 10 a. m., will be Colonel Edward L. Munson, Colonel J. Wilson Shiels, San Francisco; Lieutenant John C. Dement, San Diego; Colonel Harry G. Ford, San Francisco; Lieutenant-Colonel Daniel L. High, Los Angeles; Major Robert T. Legge, Berkeley.

#### Industrial Medical Practice

The personnel of the original Industrial Medical Practice Committee appointed in May, 1924, was changed during 1925 by reason of the resignation of its general chairman, Dr. Sol Ilyman, September 15, 1925. Dr. Philip Stephens, of Los Angeles became general chairman; other members of the committee are:

San Francisco Section—W. H. Winterberg, Section chairman; E. W. Cleary, J. H. Graves, Emmet Rixford, Lester O. Kimberlin.

Los Angeles Section—Ray C. Taylor, Section chairman; Harlan Shoemaker, H. G. McNeil, Packard Thurber.

General State Section—C. E. Von Geldern, Section chairman; C. A. Dukes, W. C. Adams, Clarence E. Rees, J. L. Maupin.

The committee has held two open meetings with the Council during 1925, and at the January meeting the Principles of Medical Ethics as Applied to Industrial

Medical Practice, published in the March issue of CALIFORNIA AND WESTERN MEDICINE, were adopted and reprints ordered sent to all county secretaries for distribution to interested members.

#### Clinical Prizes

Drs. Dudley Fulton, chairman; Fred R. Fairchild and George Dock, the committee appointed to formulate rules governing the award of prizes, will also pass upon the papers submitted and report their findings at the first House of Delegates meeting.

The cash prize for the best essay submitted in competition for the clinical prize was awarded to Dr. Emil Bogen of Los Angeles for his contribution entitled "Arachnidism, A Study of Spider Poisoning."

The committee has reported that there was no award made of the cash prize for any essay submitted in competition for the research prize, but one essay entitled "A Study of Carbohydrate Tolerance in Normals and Non-Diabetics," by Drs. Albert H. Rowe and Hobart Rogers of Oakland was awarded honorable mention.

The first chairman appointed, Dr. A. W. Hewlett, resigned on August 31, 1925, because of ill-health; Dr. Walter C. Alvarez, who succeeded Doctor Hewlett, resigned on December 31, 1925, by reason of his removal to Minnesota. Since January 22, Dr. Dudley Fulton has served as chairman.

#### Board of Trustees

It is recommended that the society consider the advisability of providing a board of trustees to exercise a custodianship of Society funds or properties somewhat after the fashion of the American Medical Association.

#### Permanent Convention Headquarters

The question of permanent headquarters for the Society continues to be advocated. It is one of such importance that it should be viewed from every angle. The Council feels that it should not be dropped at this point, and recommends that the committee be continued.

#### A Munificent Gift

At the 158th meeting of the Council, held January 30, 1926, Dr. William E. Musgrave, the editor of the Journal, presented formally and in writing to the California Medical Association 200 shares of the capital stock of "Better Health." These shares represent a cash value of \$20,000, and are paid in full. It is a question whether so valuable a gift has ever been made to any state medical association by a member.

It is a free gift. No conditions were made, nor are there any attached thereto. The stock was received by the Council to be held by the chairman and was by him, in the presence of the secretary, deposited in the Wells Fargo Bank and Union Trust Company on February 4, 1926.

The report of the Council was referred to the Reference Committee.

**Appointment of the Reference Committee**—The president appointed as members of the Reference Committee, Morton R. Gibbons of San Francisco, chairman; Daniel Crosby of Oakland and Robert Pollock of San Diego.

**Report of the Committee on Scientific Program**—Emma W. Pope of San Francisco, as chairman, submitted the following report of the Committee on Scientific Program:

The program for the 155th meeting of the California Medical Association, held at Oakland, April 26 to May 1, 1926, differs from all preceding programs, in that a full week has been set apart for this meeting. The first two days will be devoted to clinics conducted by invited guests in Fabiola and Merritt hospitals. Dr. Gabriel Tucker of the Bronchoscopic clinic, University Hospital, Philadelphia, was prevented from attendance by reason of serious illness in his family; Dr. Emil Beck of Chicago and Dr. John de Jarnette Pemberton of the Mayo clinic will hold cancer and goiter clinics. These guests will also address the General Session on Thursday morning. We are indebted to the Academy of Medicine for the privilege of inviting Dr. D. Brouwer of the University of Amsterdam,

Holland, to address this meeting on the "Pathology of Sensibility."

There has been a very decided curtailment in the number of section meetings and a definite movement toward the grouping of the more specialized branches under larger general sections. The direct result of this is that papers formerly presented before a small-sized audience engaged in the same specialty are now heard by larger mixed audiences glad of the opportunity to learn of the work of specialists to whom they are referring their cases. There is a decided lessening of papers submitted for publication in CALIFORNIA AND WESTERN MEDICINE, and as a corollary a very pronounced easing of the problem of its editor.

All papers read at this 1926 annual meeting shall by action of the Council be published in full in CALIFORNIA AND WESTERN MEDICINE as soon after the meeting as space will permit, or, at the option of the author, an abstract of the paper of about one column in length shall be published as soon as possible after the meeting, with reprints in full of the entire paper (the cost of setting up type for the reprint to be borne by the Association, and all other costs to be borne by the author). Under this Council ruling, Section officers must approve all papers read before their Sections. It is a very evident deduction that a paper cannot be approved unless submitted completely written. Since papers are regularly accepted in order of presentation, many good papers are declined because they are presented after completion of Section programs. Though it seem unnecessarily early, all papers should be in the hands of Section secretaries by the 1st of February. Completed programs are furnished the state office on February 15 of each year, in time for the April Journal, which goes to print on the 20th of March.

No delinquent member may present a paper, and no one member may present more than one paper. An abstract of not to exceed fifty words must accompany each accepted paper.

Summarizing, it is advisable therefore that space on any given program be applied for early; that a completed paper be in the hands of Section secretaries by January 1 of any year, and that a fifty-word abstract accompany each completed paper.

An innovation this year will be a luncheon held on the last day of the meeting, at which the Program Committee, the Section officers for 1926 and officers of the California Medical Association will discuss program problems with the hope of eliminating faults of this year and incorporating suggestions for the 1927 session.

The report of the Committee on Scientific Program was referred to the Reference Committee.

**Report of the Auditing Committee**—Morton R. Gibbons of San Francisco, acting chairman of the Auditing Committee, stated that the books of the Association had been audited by Hugh Ross, public accountant, San Francisco, and found correct for the year 1925. He then read the items of total receipts and disbursements and stated that the report of the auditor was on hand for examination if desired.

The report of the Auditing Committee was referred to the Reference Committee.

**Report of the Secretary**—The secretary, Emma W. Pope of San Francisco, presented the following report:

This third year's statement but echoes what previous secretarial reports have told. The California Medical Association is steadily progressing. In numbers it has been increased by almost 200 members, making a total of 4138.

The financial statement shows that during 1923, \$10,-370.81 was saved: \$4,450.29 in 1924; and \$12,672.05 in 1925. This added to \$4,219.01 on hand January 1, 1923, gives the Association \$31,712.16 at interest in various savings banks. This is certainly a long step in advance of the custom formerly followed by the Medical Society, where no reserve was ever on hand and \$2000 had to be yearly borrowed until a sufficient amount of dues could be collected to carry the monthly indebtedness of the Society. To every association, as to every individual, a substantial reserve lends dignity, gives an independence of thought and action, and an ability to accomplish much that otherwise is not possible.

In setting the dues of the Association, these advantages

may well be borne in mind and a yearly reserve be provided for. Then, in place of the \$4219 reserve on hand in 1922, the termination of the first twenty years since the Society's reorganization in 1902, the California Medical Association might have something tangibly representative of an association of its size and character by 1942—the close of the second twenty years of its existence. It might, as do most fraternal organizations, own its own home; it might have a fund to provide for its aged or impecunious members; it could well cover with a blanket policy the health of its retired or affiliate members. To many such worthy causes the interest from a generous reserve could be profitably applied.

During 1925 the Placement Bureau found locations for 37 physicians, 4 technicians, and 9 nurses and stenographers. The letters of appreciation on file from members so placed are the true index of the great value of this service.

The Extension Bureau is monthly sending speakers to local societies. The lanterns purchased by the Association have been of much practical service in this extension work.

That the clerical work of the office of the California Medical Association has functioned efficiently and harmoniously, is due in a large measure to the constant, faithful co-operation of county secretaries. Remittances for membership dues have been prompt. The reports have been made on triplicate blanks, alphabetically arranged as the office requested. In this way one record has been kept in the state office, a duplicate returned to the county secretary, and the triplicate copy forwarded the American Medical Association. Errors that formerly crept in, due to recopying and alphabetical rearrangement have practically disappeared. Membership cards can now be promptly sent out on the same or the following day that county reports are received. On March 31 nine counties had been reported in full, and the dues of 3756 members were paid. If such promptness is in any way indicative of satisfaction, then nine-tenths of the entire membership at least are harmoniously inclined toward their state organization.

Let me urge members to avail themselves of the opportunities and privileges to which membership in the California Medical Association entitles them. Read your Journal; write for it; attend your county meetings and take part in them; attend the annual state meeting; present papers; use the Extension Service, either in hearing or giving talks. When in San Francisco or Los Angeles visit the teaching hospitals; use the Placement Bureau in finding a *locum tenens* for yourself or in securing office assistants, whether nurses, stenographers, or doctors of medicine. Use the state office as a general information bureau of the Association. Members who *do* avail themselves freely of all these services never aimlessly inquire what they get for membership in their state organization. They know! Those members who without any other expense than their annual dues secured through our Placement Bureau positions which pay them from \$200 to \$1000 a month, or as happened to one of our members this year, disposed of a country practice and secured a most lucrative city practice, appreciate to the full the benefits received from membership in the State Association.

The report of the secretary was referred to the Reference Committee.

**Report of the Editor**—In the absence of Dr. William E. Musgrave, editor of CALIFORNIA AND WESTERN MEDICINE, Emma W. Pope, secretary, read the following report of the editor:

Our magazine continues a steady and encouraging growth in circulation, assets, income, influence, and usefulness. Under wise direction it may become a constantly increasing force for good and credit to its owners.

Our most serious former problem of what to do with the excessive offerings of articles has been solved. At the annual session last year we had on hand over one year's supply of copy. We now have on hand a normal supply of about six months. This satisfactory showing has been brought about by closer editorial scrutiny of offerings by a changing committee of editorial advisers, by enlarging the size of the magazine, by encouraging authors to revise and shorten their communications, and by encouraging specialists to submit articles of interest only to



specialists to appropriate magazines. The spirit of co-operation with the editor and his advisers by over 95 per cent of our contributors has been splendid, but there are a few who have resented editorial suggestions designed to improve their copy, and now and then some one resents having his offering declined.

An increasing amount of the editor's time is taken up in assisting and advising authors about articles they desire to publish elsewhere. This service is as useful and pleasant as that of helping an author revise and edit his offerings to our own magazine. There is pleasure also in assisting writers of limited experience to get their copy into presentable shape. That this service is deeply appreciated is attested by hundreds of letters that are encouraging and helpful to the editor. For the occasional resentment of the disappointed I have a deep sympathy. I still hold as a treasured possession my maiden effort at writing, over twenty-five years ago, as it was returned to me by my beloved chief, the late Paul Casper Freer. There was not a sentence in my copy that he had not done something to, and some whole pages had been reduced to single sentences. My anger was of that superb quality which is the heritage of inexperience or intolerant youth. The lessons learned from years of daily and hourly association with that remarkable man I try to pass on to others with a sympathy and understanding that troubles not my conscience.

**Surplus Copy**—We are still offered many more manuscripts than we can possibly publish. Among these are scores of excellent, carefully prepared discourses by nationally known medical writers from all parts of the United States and some from far countries. All of these, except when presented by invitation before a California, Nevada or Utah medical society, have been declined. Copies of offerings by the owners of our magazine and those who are eligible by affiliation continue to be received in far larger numbers than could be published if they were all acceptable. Which of these essays to accept, which to decline, which to mark up with suggestions and return to the author with an invitation to revise, is a large and serious problem, one, however, that is inherent in the editorial offices of any worthwhile publication, scientific or secular. After much study and correspondence with other editors, a method of handling our problem was proposed to and approved by the Council of the California Medical Association and published in the March issue of CALIFORNIA AND WESTERN MEDICINE. The Council added to the editor's recommendation some special rules regarding the publication of papers presented at the annual sessions of the California Medical Association. All of this information has been reprinted and authors are invited to secure copies of the pamphlet from the editor or the secretary of the California Medical Association and profit by its suggestions, which constitute the approved policies and rules which apply alike to editor and contributor. Medical authors of limited writing experience will also enhance the value of their contributions and decrease the chances of having them declined by editors of any medical magazine by securing and studying the little book called "The Art and Practice of Medical Writing" by George H. Simmons and Morris Fishbein, published by the American Medical Association.

**Promoting Circulation**—The scientific usefulness and the financial value of any periodical is in direct proportion to its paid circulation. CALIFORNIA AND WESTERN MEDICINE has doubled its circulation and its advertising income during the last five years. It ought to repeat this feat in another five years. There are at least 5000 additional doctors in our territory who should be either member subscribers or fully paid subscribers. Fully paid subscriptions have increased considerably during the past year as a result of two form letters approved by the Council. One letter is a tactfully worded invitation to subscribe, which is sent by the secretary of the California Medical Association with a sample copy of the magazine to each new licensee by the Board of Medical Examiners. The other is a letter signed by the editor enclosing a postcard subscription order sent to groups of doctors who are licensees but who are not members of the California Medical Association. The results of both letters have been quite encouraging.

**Financial**—From a financial point of view, CALIFORNIA AND WESTERN MEDICINE is now a very valuable property, and it can be made many times more valuable. Its financial status is partially represented in the report of the Council, but its assets extend much further than these figures imply or possibly than need be shown, as the magazine is owned by the Association. It must be borne in mind that sooner or later an editor must have compensation, and if this need is overlooked until an emergency arises there might occur a hiatus difficult to fill. There are other reasons which need not be discussed here why eventualities might be anticipated with safety by the adoption of a more extended accounting system.

**Libraries**—Libraries are proverbially poor. There are several hundred of them in the United States and more hundreds elsewhere. We have been frequently requested to place first one and then another of them, including foreign libraries, on a free mailing list. While such an extension of our circulation would be of undoubted value to our magazine, to our contributors in particular, and to the cause of Western medicine in general, it would be expensive, and circulation of this class is looked upon by advertisers as of little value to them.

**Exchanges**—We now exchange with some ninety other medical periodicals. All of these go to the library of the San Francisco County Medical Society as soon as the editor has examined them. There are several hundred good medical journals in this country and abroad that we do not exchange with. We have hesitated to enlarge our list because of the expense and, as mentioned above about libraries, this form of increased circulation does not increase advertising values and rates. So far as the needs of the editor are concerned, about fifty selected medical magazines are all that are essential. The San Francisco County Society library would like the list enlarged. The general welfare of our magazine and the interests and reputation of our contributors would be greatly enhanced by having CALIFORNIA AND WESTERN MEDICINE go to some 300 or 400 of the 600 or more medical journals of the world. Many of the special and some of the more general medical magazines, both in this country and abroad, have access to good libraries fully supplied with current medical literature, and therefore decline to exchange with any other publication. The recently greatly increased postal rates have caused some medical periodicals to revise and further limit their exchange list.

Considered purely from a financial point of view, the net income of CALIFORNIA AND WESTERN MEDICINE would be materially improved by abolishing its exchange list. However, there are other considerations that make such action inadvisable. The question is important but involved. It ought to have serious study by an industrious committee whose report could form the basis of a definite and much-needed policy resolution by the Council or the House of Delegates.

**Books**—Neither the better class book publishers nor medical editors are satisfied with the perfunctory routine methods of handling book reviews now in vogue. The subject is too important and too involved to go into here, but it needs careful consideration by a special committee from whose report the Council could issue much-needed policy instructions.

**Bibliographies**—CALIFORNIA AND WESTERN MEDICINE has for some years discontinued, except in special instances, the publication of "lists of references cited," often mis-called bibliographies, appended to many manuscripts. This action was taken because careful checkups show from 10 to 50 per cent of the references to be incomplete or inaccurate. Some authors include references to contributions not mentioned in the body of their discourse, and in some instances such references deal with matter entirely foreign to the author's theme. Some writers seem to consider "bibliographies" and "lists of references cited" as identical. With accurate, well-indexed publications like the Cumulative Index of the American Medical Association—quite inclusive of current medical literature—appearing every three months, the inclusion of a bibliography as part of the ordinary discourse even when it is well done is of doubtful value. An accurate list of references cited and actually used by an author in his contribution is often of value, but such lists of authors or



Miley B. Wesson, San Francisco  
Chairman, Section on Urology



J. H. Woolsey, San Francisco  
Secretary, Section on  
General Surgery



R. L. Wilbur, Stanford University  
Chairman, Technical Specialties  
Section



C. E. von Geldern, Sacramento  
Secretary, Section on Industrial  
Medicine and Surgery



J. H. Breyer, Pasadena  
Assistant Secretary, Section on  
General Surgery



E. L. Gilcreest, San Francisco  
Vice-Chairman,  
Section on General Surgery



T. O. Burger, San Diego  
Chairman,  
Section on General Surgery



Samuel Ayres, Jr., Los Angeles  
Secretary, Section on Dermatology  
and Syphilology



H. A. Rosenkranz, Los Angeles  
Secretary  
Section on Urology



literature cited do not constitute a bibliography. We would be delighted to publish lists of references cited and used by contributors *if we had the personnel to check them up* as to accuracy and completeness. This is tedious, trying drudgery for someone sufficiently trained to do such work. It would require about one-fourth of the time of a qualified person to do this for our magazine. My only recommendation is that if you, the owners of CALIFORNIA AND WESTERN MEDICINE, want references published, you provide for the expense necessary to have the work done intelligently and accurately.

**Binding**—CALIFORNIA AND WESTERN MEDICINE always has been "stapled." The April issue is "sewed." Sewing costs about \$90 an issue more than stapling. The advantages of sewing are obvious. Your instructions as to whether the magazine will hereafter be sewed or stapled are invited.

**Associates and Assistants**—It has been possible for me to live eighty miles from the office and edit CALIFORNIA AND WESTERN MEDICINE because of the splendid loyalty of hundreds of colleagues and editorial advisers as well as being blessed with remarkably loyal and capable assistants. The advertising has been handled, as heretofore, entirely by Miss Sue Van Wagenen, assisted by our able advertising solicitor, Mr. L. J. Flynn, for the local field, and the Co-operative Advertising Bureau of the American Medical Association for national advertising. Miss Van Wagenen also has had full charge of the office, and with one assistant has carried the brunt of the office routine and contact with the printers and the public. The James H. Barry Company, under the management of Mr. W. H. Barry, superintendent of publications, has continued to give us splendid service and whole-hearted co-operation at all times. Dr. Emma Pope and her staff of the secretary's office have rendered full co-operation and qualified assistance in our mutual endeavors. Miss Ruth Cushman, who was severely injured in the "Key Route" accident last year, is still away from the office, but her position has been held for her and she is expected to return to duty shortly.

The report of the editor was referred to the Reference Committee.

**Unfinished Business**—The secretary read the following amendments to the Constitution and By-Laws introduced at the annual meeting of 1925:

Amend the Constitution, Article III, to read as follows:

## CONSTITUTION

### ARTICLE III

#### MEMBERS AND GUESTS

**Section 1. Members**—The members of the Association are the members of the component county societies and include all the active, associate and affiliate members thereof. Every member of the California Medical Association (hereafter elected) must hold the degree of Doctor of Medicine from an institution of learning accredited at the time of conferring such degree by the American Medical Association, and must be elected to membership by the component county society of the county wherein he resides, and pay all dues to the secretary of his county society.

**Sec. 2. Active Members**—Active members shall be elected from those Doctors of Medicine licensed to practice medicine and surgery in the state of California who in the judgment of the component county society of the county of residence thereof are deemed of such ethical integrity as is required for such membership. (Except if he lives on or near a county line a member may, with the previous written consent of the county of his residence, join the society of the county, most convenient for him to attend, and such adjoining county shall be included in the term county of residence as herein used.)

**Sec. 3. Associate Members**—Associate members shall be elected from those Doctors of Medicine engaged in teaching or research work or holding position in Federal service or otherwise, who are not licensed to practice medicine and surgery in the state of California and hence are ineligible to active membership. These members shall have all the rights and privileges of active members except the right to vote or hold office. Their dues to the

State Association shall be one-half the dues of active members, and their dues to their county society shall be fixed by such county society.

**Sec. 4. Affiliate Members**—Affiliate members shall be elected from those Doctors of Medicine eligible for active membership, but who are, for any reason satisfactory to the county society and the Council of the State Association, entitled to special consideration. These members shall have all the rights and privileges of other members except the right to vote or hold office. Their dues to the State Association shall be \$1 per year, and their dues to their county society shall be fixed by such county society.

**Sec. 5. Honorary Members**—Honorary members of the California Medical Association may be elected by the House of Delegates.

Amend the Constitution, Article VI, Section 4, to read as follows:

## ARTICLE VI

### OFFICERS

**Section 4.** No delegate during his term of service as delegate shall be eligible to any office named in Section 1 except that of Councilor, and no person shall be elected president, president-elect, vice-president and councilor who has not been a member of the Association for two years preceding his election. Every delegate and alternate to the House of Delegates of the California Medical Association must have been a member of the Association for one year prior to his election.

Amend By-Laws, Chapter I, Section 1, to read as follows:

## BY-LAWS

### CHAPTER I

**Section 1.** All members of county societies—active, associate, and affiliate—shall by virtue of such membership hold corresponding membership in the California Medical Association upon certification by the secretary of the county society of such membership and receipt by the secretary of this Association of the assessment for the fiscal year.

Amend the By-Laws, Chapter I, by adding a new section to be numbered 5, reading as follows:

**Section 5.** A member who changes his residence from the county through whose society he holds membership in this Association to another county in which there is a county society, is eligible to membership in the component county society of his new residence on the presentation of a transfer card, and an official statement that his dues have been paid in full in the society in which he holds membership; provided that no evidence which would otherwise disqualify him for membership arise. He shall forfeit his membership in this Association one year after change of location unless he becomes a member of the society of the county to which he has moved. Any member who has heretofore changed his residence as aforesaid shall have one year after the date of the adoption hereof to comply with the provisions of this section.

Amend the By-Laws, Chapter VII, Sections 4 and 14, to read as follows:

**Section 4.** Each county society shall judge the qualifications of its members. However, as such societies are integral parts of this Association and all the basis of membership in the American Medical Association, it is necessary that the qualifications meet the minimum requirements of the state and national organizations. These minimum requirements are that to be eligible for election as an active or affiliate member the applicant must hold the degree of Doctor of Medicine from an institution of learning accredited at the time of conferring such degree by the American Medical Association, and must be licensed to practice medicine and surgery in the state of California. Every associate member must hold the degree of Doctor of Medicine from an institution of learning accredited at the time of conferring such degree by the American Medical Association, and must not be licensed to practice medicine and surgery in California and hence be ineligible to active membership. A member must not practice or claim to practice or lend his support, co-operation or in any other way endorse any exclusive



Moses Scholtz, Los Angeles  
Chairman, Section on Dermatology  
and Syphilology



J. Catton, San Francisco  
Chairman, Section on  
Neuropsychiatry



F. R. Nuzum, Santa Barbara  
Chairman, Section on  
Pathology and Bacteriology



J. W. Sherrick, Oakland  
Chairman, Section on  
Obstetrics and Gynecology



J. Marion Read, San Francisco  
Secretary,  
Section on General Medicine



F. R. Fairchild, Woodland  
Chairman, Section on Industrial  
Medicine and Surgery



A. J. Thornton, San Diego  
Secretary,  
Section on Pediatrics



W. H. Dudley, Los Angeles  
Chairman, Section on Eye,  
Ear, Nose and Throat



H. A. Thompson, San Diego  
Chairman,  
Section on Anesthesiology



system of medicine or any person practicing the same. He shall be honorable and ethical in his conduct and shall subscribe to the principles of medical ethics of the American Medical Association, and shall recognize the Council of this Association as the proper authority to interpret any doubtful points in ethics. Every applicant for membership in a county society shall fill out and sign in duplicate the application blanks provided by the society which prescribe the necessary qualifications for membership. One copy of each such application shall be promptly forwarded to the office of this Association.

Section 14. Any county society may in its discretion elect active, associate, and affiliate members under and pursuant to the provisions of Article III of this Constitution. Any county society may also elect honorary members of its own society, but such honorary members shall not thereby be honorary members of this Association.

On motion of Soiland, Los Angeles, seconded by Catton, San Francisco, amendments to the Constitution, Article III, Sections 1, 2, 3, 4, and 5, except that portion of Section 2 reading: "Except if he lives on or near a county line a member may, with the previous written consent of the county of his residence, join the society of the county most convenient for him to attend, and such adjoining county shall be included in the term 'county of residence' as herein used," which was deleted; Article VI, Section 4, and amendments to the By-Laws, Chapter I, Sections 1 and 5; Chapter VII, Sections 4 and 14, were unanimously adopted section by section and as a whole by the House of Delegates.

Harlan Shoemaker, Los Angeles, then offered and introduced the following amendments to the Constitution and By-Laws:

Proposed amendments to the Constitution and By-Laws in relation to a board of trustees and other matters:

#### Amend Article VI—Officers

Section 1. To insert after word "vice-president" in line 2, the words "seven trustees."

#### Amend Article VI

Section 1, Line 8—After the word "officers" insert the words "other than trustees."

#### Amend Article VI

Section 2, Line 1—After the word "councilors" insert the words "and trustees."

#### Amend Article VI

Section 2, Line 3—Insert additional sentences to read: "The terms of the trustees shall be two for five years, one for seven years, and two for nine years. The president and secretary shall be elected annually.

The Council shall elect the trustees at its first meeting held after the annual meeting of the Association.

All trustees shall hold office until their successors are elected."

#### Amend Article VII

Omit the words "Beside its duties mentioned in the By-Laws, it shall constitute the Finance Committee of the House of Delegates.

#### Amend Article IX—Funds and Expenses

Line 3—Insert after "voluntary subscriptions" the words "donations, endowments, and gifts."

Line 6—Omit words "House of Delegates by two-thirds vote of those present" and insert the words "board of trustees."

#### Article XIII

Insert new article to be numbered Article XIII, entitled "Trustees." Text to read:

Section 1. The Board of Trustees shall consist of seven members who shall hold, administer, manage and control all funds and properties of the Association.

Sec. 2. No person shall expend or use for any purpose money belonging to the Association without the approval of the Board of Trustees.

Sec. 3. All acts of the Council involving expenditure, appropriation, or use in any manner, of money, or the acquisition or disposal in any manner, of property of any kind belonging to the Association, must be approved by the Board of Trustees.

Sec. 4. The Board of Trustees may formulate rules

governing the expenditure of money to meet the necessary running expenses and fixed charges of the Association, as well as such other rules governing its actions as it may deem necessary or desirable. Four members of the board shall constitute a quorum for the transaction of business. The board shall elect its own chairman and vice-chairman, but the secretary of the Association shall be the secretary of the board.

Sec. 5. The trustees shall hold quarterly meetings at such time and place as the board shall designate, but special meetings may be called at any time by the president, and shall be called by him, on the request of two or more trustees.

Sec. 6. The trustees shall make an annual report of the financial and general status of the Association at the annual meeting of the Association, and to the Council at its fall meeting and at such other times as the Council may request.

Sec. 7. Absence of a trustee from three consecutive meetings of the Board of Trustees, without an excuse satisfactory to the Council shall be interpreted as a resignation from the Board of Trustees. Upon receiving notice from the secretary of such absence, the Council shall proceed to elect a trustee to fill the vacancy.

Sec. 8. The Council may, at any time it deems it necessary or advisable, direct the incorporation of said Board of Trustees under the laws of the state of California, and the trustees shall thereupon form and organize such corporation.

#### Chapter 4, Section 3—Duties of Officers

Line 3—After the word "Council" insert the words "and the trustees."

#### Chapter 4, Section 4

Line 2—Substitute the word "trustee" for "Council."

#### Chapter 4, Section 4

Line 9—Substitute the words "Board of Trustees" for the word "Council."

#### Chapter 5, Section 1

Substitute the word "trustees" for "chairman."

#### Chapter 5, Section 1

Line 15—Add sentence after word "year" reading: "The Council shall fill all vacancies in the Board of Trustees."

#### Chapter 5, Section 2

Change to read: "The Council shall have power to do and perform all acts, transact all business for and on behalf of the Association other than those powers and duties herein or in the Constitution vested in the Board of Trustees. The Council shall also have power to delegate any of its powers as it may determine to the Executive Committee hereinafter provided for.

"Proposed Amendments to the Constitution and By-Laws in Relation to a Board of Trustees," and other matters as above set forth, were referred to the Reference Committee.

William Duffield, Los Angeles, then offered and introduced the following resolution:

#### Resolution No. 1

"Care of Drug Addicts":

WHEREAS, Addiction to narcotic drugs presents a serious social and medical problem in which the medical profession is interested, and

WHEREAS, Means taken to combat the development of addiction to narcotic drugs, to control illicit traffic in narcotic drugs and to cure the victims of drug addiction have, in the past, been largely unscientific and without good results, and

WHEREAS, The state of California should, if possible, enact such laws and provide such means for apprehension and cure of addicts as would effectively eradicate the evils referred to, therefore, be it

RESOLVED, That the California Medical Association endorse the effort of the California Legislature now in progress in its plan to enact legislation designed to eradicate the evils referred to; and be it further

RESOLVED, That a plan which provides commitment of addicts after fair trial to a farm from which escape can be made impossible and which affords enlightened care, hospital cure, and work treatment or other plan similar,

equal or better and under control of the California State Board of Health, meet with the approval of the California Medical Association.

Resolution No. 1, "Care of Drug Addicts," was referred to the Reference Committee.

William E. Chamberlain, San Francisco, then offered and introduced the following resolution on behalf of the San Francisco Board of Directors:

#### Resolution No. 2

Resolution No. 2. Annual Dues:

RESOLVED, That the annual dues of the California Medical Association be fixed at \$7.

"Annual Dues," was referred to the Reference Committee.

Edward N. Ewer, Oakland, then offered and introduced the following resolution:

#### Resolution No. 3

Death of Doctor Edwards.

#### Death of Doctor Edwards

WHEREAS, Death has taken from us our friend and fellow-worker, T. C. Edwards, and

WHEREAS, He was a member of the Council for nearly twenty years and served faithfully and well the best interests of the Association, and

WHEREAS, Doctor T. C. Edwards was president during the year 1925 of the California Medical Association, and

WHEREAS, For more than forty years he was an honest and wise physician devoting his life to the benefit of his patients and the public welfare, and

WHEREAS, His high ethical standards and eminent morality stood as an example to all of us, and

WHEREAS, His death is an irreparable loss to medicine and to the world at large, therefore be it

RESOLVED, That we the California Medical Association in solemn conclave do hereby deplore our loss and declare our profound regard and affection for his memory; also be it

RESOLVED, That we hereby extend to his community and to his bereaved family our heartfelt sympathy; and be it further

RESOLVED, That we hereby inscribe the name of Thomas Clay Edwards on the roll of our beloved and honorable country doctors among the immortals of medicine.

Resolution No. 3, Death of Doctor Edwards, was referred to the Reference Committee.

**Reading and Adoption of Minutes**—The minutes of the session were then read and on motion of Morton Gibbons of San Francisco, seconded by Joseph Catton of San Francisco, were approved.

**Adjournment**—There being no further business, the House adjourned to meet at 8 p. m., Friday, April 30, 1926.

### MINUTES OF THE HOUSE OF DELEGATES

#### Second Session

Held in the South Room, Hotel Oakland, Oakland, California, Friday, April 30, 1926, at 8 p. m.

**Call to Order**—The meeting was called to order by the president, Edward N. Ewer of Oakland.

**Roll-Call**—The secretary, Emma W. Pope of San Francisco, called the roll; eighty-one members were seated, and the president declared a quorum present.

**Place of Meeting for 1927**—The president announced that by unanimous action of the Council, Hotel Biltmore, Los Angeles, had been chosen as the headquarters for the 1927 meeting.

**Report of the Committee on Arrangements**—Clarence De Puy, chairman of the Committee on Arrangements, submitted the following report:

**Attendance**—Special efforts were made to have members attend the Oakland meeting and personal invitations were sent to each member by the Alameda County Medical Association, inviting him to come. We wish to report that this is the largest registration at any annual meeting that the California Medical Association has ever had, the number being over 1250.

**Clinics**—The committee had considerable difficulty in



PERCY T. PHILLIPS, Santa Cruz  
President-Elect

arranging our preconvention clinics, especially in getting prominent medical men to come and conduct them. Our meeting comes at a time of the year that makes it difficult for physicians connected with teaching institutions to get away, as it is near the close of their school year and it is also too early in the year for most men to take their vacations.

We were fortunate in securing Emil Beck of Chicago and John Pemberton of Rochester, Minnesota.

Gabriel Tucker of Philadelphia, who was to have been here, was unable to come on account of sickness in his family.

The committee has tried to arrange an interesting social program for you, and we hope you have all enjoyed it. It has been our ambition to make this, the Oakland meeting, the biggest and the best meeting that the California Medical Association has ever held.

On motion, duly seconded, the report of the Arrangements Committee was unanimously adopted.

\* Percy Todd Phillips (286 Walnut Avenue, Santa Cruz). President-Elect California Medical Association, 1926. M. D. Western Reserve University, 1889. Graduate study: New York Polyclinic, 1893-94; Chicago, 1896; London and Nurnberg, 1901. Practice limited to Surgery. Hospital connections: Surgeon-in-Chief, Hanly Hospital, Santa Cruz. Previous honors and services: President Nevada State Medical Society, 1896; President Nevada State Board Medical Examiners, 1899-1900; Ex-President Santa Cruz County Medical Society; Member District Exemption Board, District 1, Division 2, during war. Scientific organizations: Santa Cruz County Medical Society; American Medical Association; California Medical Association; California Academy of Medicine; Pacific Coast Association Railway Surgeons; Fellow American College of Surgeons. Appointments: President, California State Board of Medical Examiners, 1917 to date.





ROBERT V. DAY, Los Angeles  
Vice-President

#### Election of Officers

The president declared that the first order of business was the election of officers, and appointed Lyell C. Kinney of San Diego and Albert M. Meads of Oakland tellers for the election.

**President-Elect**—Percy T. Phillips of Santa Cruz was nominated for president-elect by Daniel Crosby of Oakland. The nomination was seconded by Joseph M. King, Los Angeles, and Junius B. Harris, Sacramento.

René Bine of San Francisco was nominated for president-elect by I. W. Thorne of San Francisco. The nomination was seconded by Thomas Kelly, San Francisco, and A. C. Reed, San Francisco.

George H. Kress of Los Angeles moved that the nominations be closed; such motion being seconded by W. B. Coffey of San Francisco.

There being no further nominations, the president announced that the House would proceed to ballot. Seventy-eight ballots were cast; Percy T. Phillips, Santa Cruz, received the majority of votes taken. The president then declared Percy T. Phillips elected president-elect for the year 1926-1927.

**Vice-President**—Robert V. Day of Los Angeles was nominated for vice-president by William H. Kiger, Los

Angeles. The nomination was seconded by William Duffield, Los Angeles, who then moved that the nominations be closed; such motion being seconded by Daniel Crosby, Oakland; and the secretary instructed to cast the ballot. The secretary cast the ballot and the president declared Robert V. Day elected vice-president for the ensuing year.

#### Councilors

**Councilors-at-Large**—George H. Kress of Los Angeles was nominated by W. A. Swim, Los Angeles, for councilor-at-large to succeed himself. The nomination was seconded by Harlan Shoemaker of Los Angeles. There being no further nominations, the president declared the nominations closed and instructed the secretary to cast the ballot. The secretary cast the ballot, and the president declared George H. Kress elected councilor-at-large for the ensuing three years.

Harlan Shoemaker of Los Angeles was nominated by Percy T. Magan of Los Angeles for councilor-at-large to succeed himself. The nomination was seconded by Joseph Catton of San Francisco, who then moved that the nominations be closed; such motion being seconded by Daniel Crosby of Oakland; and the secretary instructed to cast the ballot. The secretary cast the ballot, and the president declared Harlan Shoemaker of Los Angeles elected councilor-at-large for the ensuing three years.

Charles L. Curtiss of Redlands was nominated by T. A. Card, Riverside, for councilor-at-large to succeed himself. The nomination was seconded by Charles P. Thomas of Los Angeles, who then moved that the nominations be closed; such motion being seconded by W. B. Coffey of San Francisco; and the secretary instructed to cast the ballot. The secretary cast the ballot, and the president declared Charles L. Curtiss elected councilor-at-large for the ensuing three years.

Joseph Catton of San Francisco was nominated by Henry A. Ryfkogel, San Francisco, for councilor-at-large to succeed René Bine. The nomination was seconded by A. C. Reed of San Francisco.

Gayle G. Moseley of Redlands was nominated by Eugene LeBaron of Brawley for councilor-at-large to succeed René Bine; such nomination being seconded by Gifford L. Sobey, San Luis Obispo, who then moved that the nominations be closed. A. C. Reed of San Francisco seconded the motion. A ballot was then taken and the president instructed the tellers, Lyell C. Kinney, San Diego, and Albert M. Meads, Oakland, to count the ballot. Doctor Catton received the majority of the votes cast. The president then declared Dr. Joseph Catton elected councilor-at-large to succeed Dr. René Bine.

**Third District**—William H. Bingham of Salinas was nominated by Joseph Catton, San Francisco, to succeed himself as councilor for the Third District. The nomination was seconded by William P. Lucas, San Francisco, who then moved that the nominations be closed; such motion being seconded by Harlan Shoemaker of Los Angeles; and the secretary instructed to cast the ballot. The secretary cast the ballot, and the president declared William H. Bingham elected councilor for the Third District for the ensuing three years.

**Fifth District**—John Hunt Shephard of San Jose was nominated by David A. Beattie, San Jose, to succeed Doctor Beattie as councilor for the Fifth District. The nomination was seconded by W. B. Coffey, San Francisco, who then moved that the nominations be closed; such motion being seconded by Joseph Catton of San Francisco; and the secretary instructed to cast the ballot. The secretary cast the ballot, and the president declared John Hunt Shephard elected councilor for the Fifth District for the ensuing three years.

**Sixth District**—Walter B. Coffey of San Francisco was nominated by John H. Graves, San Francisco, to succeed himself as councilor for the Sixth District. The nomination was seconded by George H. Kress of Los Angeles, who then moved that the nominations be closed; such motion being seconded by C. P. Thomas of Los Angeles; and the secretary instructed to cast the ballot. The secretary cast the ballot, and the president declared Walter B. Coffey elected councilor for the Sixth District for the ensuing three years.

**Seventh District**—Oliver D. Hamlin of Oakland was nominated by Dudley Smith, Oakland, to succeed Dudley

\* Robert V. Day (Detweiler Building, Los Angeles). M. D. University of California, Department of the South, 1897. Practice limited to Urology since 1913. Hospital connections: Senior Attending Urologist, Los Angeles General Hospital; Chief Urological Department, White Memorial Hospital and Boyle Avenue Clinic; Staffs California, Lutheran, Methodist, and Hollywood hospitals. Previous honors: Formerly Chairman, Section on Urology, American Medical Association. Present scientific organizations: Los Angeles County Medical Association; California Medical Association; American Medical Association; American Urological Association; Los Angeles Clinical and Pathological Society; Los Angeles Symposium Society. Publications: "A Method for Accurate Collection of the Bladder Leakage of Phthalein in Kidney Studies (Journal of Urology, January, 1925); "Ectopic Opening of the Ureter in the Male, with Report of a Case" (Journal of Urology, March, 1924); "A Plan for the Early Diagnosis and Management of Primary Papilloma of the Ureter and Kidney Pelvis, Surgery, Gynecology and Obstetrics" (April, 1925), and about a dozen more.



OLIVER D. HAMLIN, Oakland  
Chairman of the Council

Smith as counselor for the Seventh District. William Duffield, Los Angeles, seconded the nomination and moved that the nominations be closed; such motion being seconded by W. D. Coffey of San Francisco; and the secretary instructed to cast the ballot. The secretary cast the ballot, and the president declared Oliver D. Hamlin elected counselor for the Seventh District for the ensuing three years.

**Ninth District**—James H. McLeod of Santa Rosa was nominated by Harry O. Hund, San Rafael; such nomination being seconded by William Duffield, Los Angeles.

James H. McLeod, Santa Rosa, requested that his nomination be withdrawn, which was done, and nominated Henry S. Rogers, Petaluma, as counselor for the Seventh District to succeed James H. McLeod. William J. Quinn, Eureka, seconded the nomination and moved that the nominations be closed; such motion being seconded by Robert Peers, Colfax; and the secretary instructed to cast the ballot. The secretary cast the ballot, and the president declared Henry S. Rogers elected counselor for the Ninth District for the ensuing three years.

\* Oliver D. Hamlin (Federal Realty Building, Oakland). M. D. Stanford University Medical Department, 1894; M. S., University of Santa Clara, 1890. Graduate study: Johns Hopkins University, 1901; Practice limited to Surgery since 1910. Hospital connections: Chief of Staff, Providence Hospital; Chief Surgeon, Alameda County Emergency Hospital since 1905; Consulting Surgeon to Merritt Hospital. Previous honors and services: Former Professor Surgery, Oakland College of Medicine and Surgery. Scientific organizations: Alameda County Medical Society; California Medical Association; American Medical Association; Alameda County Surgical Association; Pacific Coast Association Railroad Surgeons; Fellow American College of Surgeons. Appointments: Chief Surgeon Alameda County Emergency Hospital; Division Surgeon Southern Pacific Company. Publications: "Traumatic Injuries to Abdomen"; "Shock"; "Fracture of Skull"; "Abdominal Drainage," all published California and Western Medicine.

**Member of the Committee on Scientific Program**—Lemuel P. Adams of Oakland was nominated by Dudley Smith, Oakland, as a member of the Program Committee. The nomination was seconded by H. B. Mehrmann, Oakland, who then moved that the nominations be closed; such motion being seconded by Joseph Catton, San Francisco. The secretary cast the ballot, and the president declared Lemuel P. Adams elected member of the Program Committee for the ensuing four years.

**Delegates to the A. M. A.**—The president advised the House that it was necessary to elect five delegates to the American Medical Association at this session.

Victor Vecki of San Francisco was nominated by Joseph Catton, San Francisco, as delegate to the A. M. A. for a two-session term, to succeed himself; such nomination being seconded by George Kress, Los Angeles, who then moved that the nominations be closed. H. B. Mehrmann, Oakland, seconded the motion. The secretary cast the ballot, and the president declared Victor Vecki elected delegate to the A. M. A. for the ensuing two sessions.

Percy T. Magan of Los Angeles was nominated by William Duffield, Los Angeles, as delegate to the A. M. A. for a two-session term to succeed Hans Lisser, San Francisco; such nomination being seconded by William Kiger, Los Angeles, who then moved that the nominations be closed. C. P. Thomas, Los Angeles, seconded the motion. The secretary cast the ballot, and the president declared Percy T. Magan elected delegate to the A. M. A. for the ensuing two sessions.

Dudley Smith, Oakland, was nominated by Walter B. Coffey, San Francisco, as delegate to the A. M. A. for a one-session term to succeed Lemuel P. Adams, Oakland; such nomination being seconded by H. B. Mehrmann, Oakland, who then moved that the nominations be closed. Daniel Crosby, Oakland, seconded the motion. The secretary cast the ballot, and the president declared Dudley Smith elected delegate to the A. M. A. for one session.

Albert Soiland of Los Angeles was nominated by W. E. Chamberlain, San Francisco, as delegate to the A. M. A. for a one-session term to succeed himself; such nomination being seconded by W. B. Bowman, Los Angeles, who then moved that the nominations be closed. Harlan Shoemaker seconded the motion. The secretary cast the ballot, and the president declared Albert Soiland elected delegate to the A. M. A. for one session.

Robert Pollock of San Diego was nominated by John C. Yates, San Diego, as delegate to the A. M. A. for a one-session term to succeed Robert V. Day; such nomination being seconded by H. B. Mehrmann.

Martha Welpton of San Diego was nominated by Mott H. Arnold, San Diego, as delegate to the A. M. A. for one session to succeed Robert V. Day. C. P. Thomas, Los Angeles, seconded the nomination and moved that the nominations be closed; such motion being seconded by W. B. Coffey, San Francisco.

There being no further nominations, the president declared the nominations closed, and a ballot was taken. Thereupon the president instructed the tellers, Lyell C. Kinney, San Diego, and Albert H. Meads, Oakland, to count the ballot. The president announced that seventy-two ballots were cast as follows: Robert Pollock, San Diego, 39; Martha Welpton, San Diego, 33. The president then declared Robert Pollock elected delegate to the A. M. A. for one session.

**Alternates**—William E. Stevens of San Francisco was nominated by W. E. Chamberlain, San Francisco, as alternate to Victor Vecki for the term of two sessions. H. B. Mehrmann seconded the nomination and moved that the nominations be closed; such motion being seconded by Dudley Smith, Oakland. The secretary cast the ballot, and the president declared William E. Stevens elected alternate to the A. M. A. for Victor Vecki.

C. D. Lockwood of Pasadena was nominated by William Duffield, Los Angeles, as alternate to Percy T. Magan for the term of two sessions. H. B. Mehrmann seconded the nomination and moved that the nominations be closed; such motion being seconded by Robert Peers, Colfax. The secretary cast the ballot, and the president declared C. D. Lockwood elected alternate to the A. M. A. for Percy T. Magan.

Walter B. Coffey of San Francisco was nominated by



A. C. Reed, San Francisco, as alternate to Dudley Smith for the term of one session. H. B. Mehrmann seconded the nomination and moved that the nominations be closed; such motion being seconded by C. P. Thomas, Los Angeles. The secretary cast the ballot, and the president declared Walter B. Coffey elected alternate to the A. M. A. for Dudley Smith.

Charles P. Thomas of Los Angeles was nominated by William Duffield, Los Angeles, as alternate to Albert Soiland for the term of one session. W. B. Coffey seconded the nomination and moved that the nominations be closed; such motion being seconded by H. B. Mehrmann. The secretary cast the ballot, and the president declared Charles P. Thomas elected alternate to the A. M. A. for Albert Soiland.

Martha Welpton of San Diego was nominated by T. O. Burg, San Diego, as alternate to Robert Pollock for the term of one session. H. B. Mehrmann seconded the nomination and moved that the nominations be closed; such motion being seconded by William Duffield, Los Angeles. The secretary cast the ballot, and the president declared Martha Welpton elected alternate to the A. M. A. for Robert Pollock.

### Report of the Reference Committee

Morton R. Gibbons, San Francisco, chairman of the Reference Committee; Daniel Crosby, Oakland; and Robert Pollock, San Diego, members.

Morton R. Gibbons, chairman of the Reference Committee, presented the following report:

1. **Address of President**—President Ewer's address, delivered before the first general session, April 28, 1926, was characterized by a sane conservatism that aptly expresses the attitude of organized medicine toward the various social problems of the day. It was chiefly devoted to a study of the surfeit of social service problems with which we are deluged, and he very pertinently asks "how far can organized medicine go in the approval of agencies whose work paves the way to state medicine?"

The testing of human intelligence was stated as being far from infallible as yet; the extreme views on heredity held by some so-called scientists and thrown broadcast by their writings were intelligently criticized.

The whole eugenic movement was shown to have little of scientific worth to it, and its offspring, birth control, as taught in many population centers, was defined as an expensive and superfluous kind of social service tending against community uplift and refinement.

A social service movement that would check the rising tide of crime, would be, he said, a welcome thing; while the reconciliation of religion to scientific effort and progress would approach the ideal, in agencies for making the world better.

2. **Address of President-Elect**—The address of President-Elect McArthur points to the vastly more rapid progress in medicine of the last fifty years than in the preceding 2000 years. It predicts for medicine greater progress in the next twenty-five years than for any other human endeavor.

The following paragraphs deserve special commendation:

"The duties of a county society are many, and they are not fulfilled when devoted exclusively to the education and good of its own members. It is largely responsible for the health of the community, and should be the central and directing force behind all health work in that section. It should call into its councils not only the representatives of boards of health of the state, county, and city, but dentists, nurses, and all agencies engaged in public health activities.

"When we fully acknowledge our obligations to society and make an earnest endeavor to liquidate the debt, showing that our actions are in keeping with our lofty ideals, there will be no difficulty in getting full co-operation of the laity."

"Union hospitals can be established just as well as union high schools, and when such are assured there will be little difficulty in supplying the demand for educated physicians in rural districts."

The characterization of the true physician would be well to remember.

This address, in the opinion of your Reference Committee, is one which it would be wise for every student of medicine to read well so that he might be helped to decide which road he should travel.

3. **Report of Editor**—This most thorough report deserves a close study. Such a study will reveal to the reader the magnitude and success of our journalistic enterprise.

As pointed out in a later paragraph in this report, the editor is giving his most valuable service to the medical profession of the Pacific Coast without salary. The suggestion made by Doctor Musgrave, more than once, that a suitable amount be set aside for salary of the editor should receive favorable action.

The Reference Committee recommends the acceptance of the report.

4. **Report of the Legal Department**—The report of the Legal Department shows good progress in the disposal of pending claims and cases. There has been a marked decrease in 1925 in the number of new claims and cases coming within the province of the department, and while some time will necessarily be required to dispose of matters on hand, the end of this Association's activity is in sight.

5. **Report of the Secretary**—The report of the secretary is worth very careful study and contemplation. In a very short report a great deal of value is said. The reference to the desirability of accumulating a reserve fund commensurate with the dignity of the Society is clearly and concisely stated. A very few years ago members of the Council who are still members were in the habit of putting their hands in their pockets at the approach of each year's end to pay the bills of the Society. It appears that some of the members fear that any substantial reserve fund might be in jeopardy in the hands of these men.

The statements outlining the advantages of the Association and services by the Association to not a few of its members must be a revelation to a large portion of the membership.

The committee recommends the report.

6. **Report of the Council**—The Reference Committee commends the report of the Council. This report gives a clear statement of the major activities of the Association. The Committee would invite attention to the following points, especially:

The Journal—Doctor Musgrave, to whose credit stands the success of our Journal, continues to serve without salary.

Excessive Fees—It seems to your committee that the comments on this subject are well made. Such manifestations of salesmanship and commercialism as sometimes appear under the cloak of medicine are such as would cause an undertaker to swell with pride.

Proposed Amendments to the Constitution and By-Laws—That section which provides for a speaker and vice-speaker of the House of Delegates has been developed because of delay and misunderstanding incident to the old system. The claim that the organization will be made topheavy by the addition of these officers, your committee believes to be without merit.

Chapter 5, Section 13, line 4, which reads: "The General Attorney shall as far as possible attend the sessions of the Council, the Executive Committee, etc.," should, in the opinion of your committee, be changed to read as suggested by the General Attorney, as follows: "The General Attorney shall as far as possible attend sessions of the Council and the House of Delegates, and also the sessions of the Executive Committee when requested by the chairman thereof or the secretary of the Association.

This change is suggested because it seems an imposition upon the time of the General Attorney to attend meetings at which his advice is sometimes not required.

The Reference Committee recommends the adoption of the By-Laws with the suggested alteration.

Medical Officers Reserve Corps—The fact that California, and particularly San Francisco district is so far

behind in its quota in the Medical Officers' Reserve Corps should call for greatly increased activities to fill the quota.

**Industrial Medical Practice**—On this subject, it should be clearly appreciated that no benefit will result from the Code of Ethics for Industrial Medical Practice, which has recently been adopted by the Association unless the County Medical Society units enforce that code. Members who are abiding by the code are now feeling obliged to lose proffered business because other members have not yet realized their obligations because of inaction of county units.

It is recommended that the county societies again provide a meeting at which members of the Council on invitation may be invited to assist in the initiation of the provisions of the code.

**A Munificent Gift**—The remarkable gift of Doctor Musgrave to the California Medical Association will be greatly appreciated.

### COMMITTEE ON THE MEDICAL PRACTICE ACT

The Reference Committee commends the action of the Council in appointing a special committee to consider desirable or needed changes in the Medical Practice Act of California, bearing, among other things on:

(a) To provide that the Governor of California appoint members to the board from nominations sent up by the three State Medical Societies—Regular, Homeopathic, and Eclectic.

(b) Arrangements to permit properly qualified undergraduate medical students to take their examinations in the fundamental medical sciences, after the completion of the second year of medical study; and

(c) They purpose to thoroughly investigate whether an initiative medical practice act might not be a desirable action on our part.

**7. Proposed Amendments to the Constitution and By-Laws**—The proposed amendments to the Constitution and By-Laws of the California Medical Association relating to a board of trustees: It is recommended that these be printed in the Journal at the same time as the minutes of this session of the State Medical Association and on one other occasion about the end of the year 1926.

**8. Resolution No. 1. Care of Drug Addicts**—The committee recommends that the resolution on the care of drug addicts be adopted and that notification of this action be made to Senator Sanborn Young and Dr. Rupert Blue.

**9. Resolution No. 2. Annual Dues**—The committee recommends that this resolution do not receive the approval of the House of Delegates.

The proposed reduction is small and can mean little to anyone. The California State Medical Association is a dignified body and should possess a dignified reserve fund. Medical education, legislation, convention headquarters, and particularly the salary of the editor of CALIFORNIA AND WESTERN MEDICINE, will one or all require consideration.

**10. Resolution No. 3. Death of Doctor Edwards**—Action of the Reference Committee—The committee recommends that the resolutions referring to the death of Doctor Edwards receive the approval of the House of Delegates.

### ACTION BY REFERENCE COMMITTEE

Doctor Gibbons then presented the report item by item:

#### 1. President's Address

Action by the Reference Committee—Committee moves for the adoption of the report.

This motion was duly seconded and unanimously adopted.

#### 2. Address of President-Elect

Action by the Reference Committee—Committee moves for the adoption of the report.

This motion was duly seconded and unanimously adopted.

#### 3. Report of Editor

Action by the Reference Committee—Committee moves for the adoption of the report.

This motion was duly seconded and unanimously adopted.

#### 4. Report of Legal Department

Action by the Reference Committee—Committee moves for the adoption of the report.

This motion was duly seconded and unanimously adopted.

#### 5. Report of the Secretary

Action by the Reference Committee—Committee moves for the adoption of the report. This motion was duly seconded and unanimously adopted.

#### 6. Report of Council

The chairman of the Reference Committee, Morton R. Gibbons, San Francisco, stated that certain items included in the report of the Council warranted special attention and then proceeded to enumerate such items.

(a) **Excessive Fees**—Action by the Reference Committee—Committee moves that the attitude expressed by the Council receive the approval of the House of Delegates.

This motion was duly seconded and unanimously adopted.

(b) **Proposed Amendments to the By-Laws**—Upon motion of George Kress, Los Angeles, seconded by Harlan Shoemaker, Los Angeles, and unanimously approved by the House of Delegates, the proposed amendments to the By-Laws were laid on the table to be considered at the 1927 annual meeting.

(c) **Medical Officers' Reserve Corps**—Action by the Reference Committee—The committee moves for the adoption of the report.

This motion was duly seconded and unanimously adopted.

(d) **Industrial Medical Practice**—Action by the Reference Committee—The committee moves for the adoption of the report.

This motion was duly seconded and unanimously adopted.

(e) **Annual Dues**—Action by the Reference Committee—The committee moves for the approval of this report.

This motion was seconded by Daniel Crosby, Oakland, and unanimously carried.

#### 7. Amendments to the Constitution and By-Laws Relating to a Board of Trustees

Action by the Reference Committee—Committee moves that the report of the Reference Committee recommending the usual printing of proposed amendments be adopted.

This motion was duly seconded and unanimously carried.

#### 8. Resolution No. 1. Care of Drug Addicts

Action by the Reference Committee—Committee moves that the resolution on the care of drug addicts be adopted.

This motion was duly seconded and unanimously carried.

#### 9. Resolution No. 2. Fixing of Annual Dues at \$7

Action by the Reference Committee—Committee recommends that this resolution do not receive the approval of the House of Delegates.

This motion was seconded by William H. Kiger, Los Angeles, and carried.

Morton R. Gibbons, chairman of the Reference Committee, advised that a resolution providing for a reduction of dues in certain classes of members had been passed to him by W. E. Chamberlain, San Francisco, but had neither been introduced or submitted at the first meeting of the House of Delegates nor laid over for consideration for the customary twenty-four hours.

On motion of George H. Kress, Los Angeles, duly seconded, it was moved that the matter of annual dues should be allowed to lay over until the end of the session. Motion carried.

On motion of George Kress, Los Angeles, seconded by H. B. Mehrmann, Oakland, it was decided that the customary procedure which provides for the laying on the table of all resolutions for a period of twenty-four hours before consideration should be adhered to. Motion carried. On motion of Joseph Catton, San Francisco, duly seconded, it was moved that the resolution be read. The



resolution providing for the reduction of dues in certain classes of members was then read, as follows:

WHEREAS, "Medical Defense" terminated as of July 1, 1924, and

WHEREAS, Members of this Association who joined subsequent to July 1, 1924, are thereby prevented from benefiting by the expenditures of this Association for its legal department, and

WHEREAS, The expenditures of this Association for its legal department amounted to \$20,076.63 during the past year, or approximately \$5 per member per year, about half of each member's annual dues; now therefore be it

RESOLVED, That this Association recognizes the manifest unfairness of assessing annual dues in equal amounts to members who are entitled to medical defense, and to members who are not entitled to such medical defense, and be it further

RESOLVED, That the annual dues of members joining this Association subsequent to July 1, 1924, be and the same are hereby fixed at a lower figure than the annual dues assessed to members who belonged to the Association prior to July 1, 1924, the exact amount of such reduced dues to be determined by the findings of the certified public accountants employed by this Association; and be it further

RESOLVED, That in the event that an amendment to the constitution shall be found necessary in order to carry out the purpose of these resolutions, such an amendment is hereby formally proposed.

No action taken.

#### 10. Resolution No. 3. Death of Doctor Edwards

Action by the Reference Committee—The committee recommends that the resolution be adopted by a rising vote.

This motion was duly seconded and unanimously carried.

#### 11. Annual Dues

Action by the Reference Committee—The committee moves that the annual dues be fixed at \$10.

This motion was seconded by H. B. Mehrmann, Oakland, and carried.

Action by the Reference Committee—The committee recommends the adoption of the entire report except those parts which have been otherwise cared for.

On motion of Harlan Shoemaker, Los Angeles, seconded by H. B. Mehrmann, Oakland, the report of the Reference Committee, which had been read section by section, was unanimously adopted as a whole.

#### Illness of James H. Parkinson

J. M. King, Los Angeles, spoke of the illness of James H. Parkinson, chairman of the Council, and moved that the secretary express to Doctor Parkinson our regret and sorrow for his inability to be with us and that she accompany this expression of regret with flowers. Unanimously approved by a rising vote.

#### Presentation of the President

The president appointed Harlan Shoemaker and George Kress, Los Angeles, to escort the incoming president, William T. McArthur of Los Angeles, to the chair. The president then presented Doctor McArthur to the House of Delegates as the president of the Association for the ensuing year. Doctor McArthur, with happy and well-chosen words, took his seat upon the platform.

#### Presentation of President-Elect

The president appointed John C. Yates, San Diego, and William H. Kiger to escort the president-elect, Percy T. Phillips of Santa Cruz, to the platform. The president then presented the newly elected president-elect to the House of Delegates. Doctor Phillips made a brief statement of appreciation and thanks.

#### Resolution of Appreciation

On motion of George Kress of Los Angeles, unanimously seconded by the House of Delegates, it was

RESOLVED, That the Association extend to Oakland its sincere appreciation of the very generous hospitality received; and

That our great thanks be tendered the public press for the manner in which they have handled the publicity of

the convention, and especially to the publicity manager, Celestine J. Sullivan.

#### Reading and Adoption of the Minutes

The minutes of this session were then read, and there being no objection were unanimously approved.

#### Adjournment

There being no further business before the House, the meeting adjourned to meet in Los Angeles in 1927.

### ALAMEDA COUNTY

Alameda County Medical Association (reported by Pauline S. Nusbaumer)—The regular monthly meeting of the Association was held at the Ethel Moore Memorial Building, April 19, 1926, and in the absence of the president, J. K. Hamilton, and the vice-president, George Rothganger, was called to order by past president H. B. Mehrmann. The following program was arranged and presented by the staff of the Alameda County Hospital: "Report of a Case of Massive Volvulus" (lantern slide illustration), T. C. Lawson. "Symposium on Thoracoplasty": a. In the Tuberculous, Chesley Bush; b. In the Nontuberculous, Harold G. Trimble; c. Surgical Aspects, Dexter N. Richards. "Treatment of Eclampsia," Clarence A. DePuy.

T. C. Lawson reported a case of volvulus of entire small intestine with torsion of mesentery in a man who came to the hospital unconscious, with symptoms pointing mainly to an intestinal obstruction with vomiting, and prostration of five days' duration. Some gastric symptoms had been present for four years, with gaseous eructations and intermittent attacks of nausea and vomiting. Examination showed principally a distended abdomen with slight rigidity of the abdominal muscles. At autopsy a massive volvulus of the entire small intestine with torsion of the mesentery was found. The dorsal attachment of the mesentery was about an inch in length, the torsion was counterclockwise, extended through two complete turns, with the entire small intestine gangrenous and distended. Fibrous peritoneal adhesions probably congenital were present, with an anomaly of the descending colon which after descending turned medially and cephalad for four inches before descending toward the rectum. Lawson stated that the present case is the seventy-seventh to be reported, of which 25 or 33.3 per cent recovered. All the recovered cases were operated upon. In a large series of cases reported, 1.5 per cent of cases of intestinal obstruction were found to be due to volvulus of the entire small intestine. The doctor described the symptoms and said that absolute diagnosis is usually impossible further than that of an intestinal obstruction. The prognosis is poor without operation; with operation the recoveries averaged 43.8 per cent. All successful cases were operated upon in less than forty-eight hours after first being seen. Treatment is laparotomy with detorsion of the volvulus.

The title of Doctor Bush's talk was "Extra-Pleural Thoracoplasty from the Standpoint of Tuberculosis." He outlined the history of the development of the present operation of extra-pleural thoracoplasty from the time when Friedrich began to operate at the suggestion of Brauer in 1907 up to the present date, pointing out the changes in technique and the reduction of operative mortality. He said that in its application to tuberculosis there were three very important factors to consider: 1. The choice of the case for operation. 2. The technique of the operation itself. 3. The after-care of the patient.

In regard to the first point, he emphasized the necessity of having a patient sufficiently long enough under a dietetic-rest régime to be able to ascertain what the nature of the individual's resistance was. Those cases most suitable for operation he said were a proliferative type of lung involvement suitable for artificial pneumothorax, but in whom artificial pneumothorax could not be accomplished on account of adhesions. As for the third factor, the after-care, Bush said that these patients should be treated in a strict sanatorium régime for a period of from nine months to one year, just as a new case would be treated on whom no operative interference had been made. Bush also emphasized the gradual contraction of

the operated lung over a period of time caused by the pulling over of the mediastinum on the operated side. He demonstrated x-rays of four patients from Arroyo Sanitarium who had submitted to the operation with apparent success.

Harold G. Trimble discussed the place of thoracoplasty in nontuberculous lung lesions. The indications for its use here are similar to those of the tuberculous group, but again it must be emphasized that thoracoplasty is not to be used as a primary, fundamental therapy, but only in that group of cases where other and simpler measures have been given an adequate trial. They may then be supplemented by such a surgical procedure. The types of cases are chronic lung abscesses, chronic empyema and bronchiectasis that is largely unilateral. The general handling may be illustrated by these cases: Case 1. M. C., Italian, aged 56. Has been under treatment for tertiary lues with associated luetic pulmonary fibrosis since 1921. Marked general improvement, but no change in lung fibrosis and Wassermann negative but once during this period. Following acute respiratory infection, lung abscess developed in left side deep at hilus region at level of angle of scapula with marked toxic symptoms and large quantity of sputum with foul odor. Odor so marked that patient must be kept in separate room, and even nurses were loath to be near him. Rest, creosote, postural drainage, salvarsan, and autogenous vaccine used without reducing amount and odor of sputum, though general condition improved over a period of four months. Thoracoplasty with resection of third to eleventh ribs gave reduction of sputum to 200 cc. in three days, and absence of any odor. Sputum cultures show continued presence of staphylococcus albus and nonhemolytic streptococcus. Patient demonstrated, noting good compression from operative procedure, and lack of noticeable deformity from the extensive resection. Has been at work for the past year and a half, as gardener, without discomfort. Sputum remains at 150 to 200 cc., odorless. Case 2. Case of bronchiectasis, largely unilateral, characterized by marked general toxicity, large amount of foul-smelling, purulent sputum and cyanosis from toxic cardiac embarrassment. Condition followed lung abscess from stab wound of chest. Several exacerbations during past four years. Under two months' bed rest and postural drainage, sufficient improvement to warrant operation. Thoracoplasty was performed in two stages. Marked improvement in general condition; cyanosis disappeared when toxicity was relieved. Sputum odorless, and averages 100 to 150 cc. daily. Patient doing carpenter work without discomfort. This procedure is not of universal application, and proper selection of cases and their adequate preparation is of paramount importance.

Dexter N. Richards in discussing the "Surgical Aspect of Thoracoplasty" called attention to the fact that when cases have been properly selected and have proper after-care, and when in addition nature supplies them with an internal thoracoplasty, it would seem that the surgical technique has little to do with the final result. Local anesthesia combined with gas oxygen analgesia is the anesthetic of choice. The doctor does not attempt to remove the first rib, as shown by the x-ray, in every case; this applies to the nontubercular rather than the tubercular cases. In abscess, marked improvement may follow the first stage and may make a second stage unnecessary. In the patient shown here that was the case. Richards' procedure has been to start with the lower ribs, resecting from the tenth to the seventh inclusive, and under local anesthesia only. The second stage follows in from ten days to two weeks, and is done under combined local and gas analgesia. Occasionally reactions are very severe, with high pulse and cyanosis. Care should be taken in determining the patient's resistance, blood pressure being an index, and where there is any doubt a preliminary phrenicotomy may help in determining.

"The Modern Treatment of Toxemias of Pregnancy" was the title of a paper presented by Clarence A. DePuy. The principal points discussed were the prophylactic treatment of the toxemias in the latter months of pregnancy and some points in handling the patient during convulsions. He quoted Fitzgibbon as stating that any healthy primipara with normal kidneys will not develop toxemia if properly cared for during the course of her

pregnancy. This consists of the regulation of diet, exercise, injection of water, and elimination. Some points of the curative treatment were also taken up, stating how the patient should be handled when first signs of toxemia appear; the treatment of moderate cases and the treatment of pre-eclamptic toxemia. He advised that attempts should be made to carry the patient over the thirty-seventh week of pregnancy, and then if necessary labor be induced preferably by means of the colon tube. Delivery by high forceps, forcible dilation of the cervix and vaginal Caesarean sections are relegated to the past, and the abdominal section is not recommended.

These papers were discussed by Daniel Crosby, Sumner Everingham, Clarence W. Page, and W. W. Cross. After the transaction of the business program, adjournment was taken to the refreshment hall and the usual social time enjoyed.



### CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by S. N. Weil, secretary)—The April meeting of the Contra Costa County Medical Society was held on Saturday, April 24, at the offices of Doctors Abbott and Hely in Richmond. S. N. Weil presided in the absence of Doctor McCullough.

Dudley Smith of San Francisco gave a most interesting and instructive lecture, combined with lantern slides, on "The Value and Technique of the Rectal Examination."

It was unanimously voted to extend the Society's condolence to Doctor McCullough upon the recent death of his father.

J. T. Breneman of El Cerrito was elected an honorary member of the Society upon the motion of U. S. Abbott.

Those present were: Drs. U. S. Abbott, G. W. Bumgarner, H. J. Belgum, John Beard, H. L. Carpenter, W. E. Cunningham, D. Keser, E. R. Guinar, F. L. Horne, L. Hely, Rosa Powell, W. A. Rowell, H. Vestal, S. N. Weil, Mrs. Redman, R. N.



### SACRAMENTO COUNTY

Sacramento Society for Medical Improvement (reported by Bert S. Thomas, secretary)—The April meeting took the form of a clinical evening at the County Hospital. President C. E. Schoff presided. The minutes of the last meeting were read and approved. There were no case reports other than those previously scheduled for the evening.

Scatena discussed two cases of typhoid fever, both of which showed three main features: First, an unusually long "septic type" swing to the temperature chart. This has been the peculiar experience of eight cases of typhoid at the County Hospital this year. Second, highly satisfactory weight maintained by the patients throughout the course of their illness under high caloric feeding; and third, the fact that neither of the Widal reactions were positive till the end of the third week. Scatena also presented two patients with auricular fibrillation. The purpose of the presentation of the patients was to discuss the relative merits of quinidine sulphate and other drugs in the therapeutics of this heart condition. Scatena believes the drug is of value when the fibrillation is comparatively new and when it is due to a general toxicity, or when it is of the paroxysmal type. However, the danger in the use of this drug does not warrant its choice over quinine sulphate or quinine hydrobromide. Scatena prefers the use of digitalis.

Beach discussed several cases of ureteral calculi and operative methods of approach.

Dunlap opened a discussion on peptic ulcer by presenting a series of x-rays taken before and after the surgical management of many cases. Bramhall discussed this subject by stressing the value of the medical management of such cases by the use of a proper Sippy diet. He said that a great number of patients are placed upon a Sippy diet without a constant checkup on the relative alkalinity of the stomach content. When this is properly followed up, the results of such treatment are very promising. Grazer inquired as to the value of co-ordinating urinary findings in these cases. This checkup is only of value where general alkalosis is present. Drysdale recounted Balfour's experience with this condition; many well-



defined peptic ulcers cannot be discovered by an external examination of the stomach. When an x-ray series in which he has the utmost confidence has shown a peptic ulcer, Balfour opens the stomach and inspects it from within. Drysdale was present at one such case. Zimmerman briefly discussed the x-ray findings.

The application of James A. Warburton was voted upon for membership. He was unanimously elected.

The Board of Directors reported the acceptance of the transfer applications of Orrin Cook and George S. Iki; both were transferred to our society from the San Francisco society.

Communications were received from Dr. John W. Green, secretary of the Solano County Medical Society, thanking us for the program presented at Vallejo on April 6, and from various presidents of the local Parent-Teacher associations, inviting the representative of the Society to their discussion of public health in the county. This meeting was held on April 10. The Society had instructed their representative, Doctor Schoff, to express its opinion as to the value of a full-time County Health Officer. After attendance at the meeting, Schoff thought the time not propitious to actively discuss this subject there.

The Banquet Committee reported a most successful banquet at the Country Club.

Soutar reported the desirability of twenty men volunteering their services for examining children of preschool age, these examinations to start on May 10. It was moved by Hale and seconded by Scatena, and carried, that any member wishing this type of work should turn in his name to the secretary.

The meeting adjourned to the usual wonderful dinner so kindly prepared by the host of the evening, Superintendent of the County Hospital, A. K. Dunlap.



## SAN JOAQUIN COUNTY

**San Joaquin County Medical Society** (reported by Fred J. Conzelmann, secretary)—The stated meeting of the San Joaquin County Medical Society was held Thursday, May 6, 1926, at headquarters of the local Health Center, 129 South American Street. The meeting was called to order by R. T. McGurk, first vice-president. Thirty-one were in attendance: Drs. E. A. Arthur, J. W. Barnes, J. F. Blinn, H. J. Bolinger, C. A. Broaddus, H. S. Chapman, F. J. Conzelmann, J. F. Doughty, L. Dozier, C. F. English, F. T. Foard, Minerva Goodman, S. Hanson, J. P. Hull, G. H. LaBerge, Grace McCoskey, R. T. McGurk, W. T. McNeil, F. G. Maggs, F. S. Marnell, J. E. Nelson, D. F. Ray, G. H. Rohrbacher, J. J. Sippy, Margaret Smyth, Hudson Smythe, C. V. Thompson, G. J. J. Vischi, B. F. Walker, N. E. Williamson, and W. J. Kerr, Professor of Medicine, University of California, as guest and speaker of the evening.

The minutes of the previous meeting were read and approved.

The Admission Committee recommended R. A. Buchanan as a member for the Society; on this recommendation, and in accordance with the Constitution, the Chair declared Doctor Buchanan duly elected an active member of the Society.

A communication of the Stockton Medico-Dental Building, Inc., requesting that the Society name three members of the Society, who shall be tenants of the building, to serve on the House Committee, together with three dentists, was read. The function of the House Committee will be to assist in planning the club and library rooms, and to pass upon the eligibility of the tenants of the building. After discussion, the following action was taken:

B. F. Walker moved that the Chair be authorized to appoint a committee of three to serve on the House Committee of the Stockton Medico-Dental Building, Inc. The motion was seconded by C. A. Broaddus and carried.

The vice-president announced that he would not at this time name the committee, but would confer with the president about it.

Doctor McGurk gave a report as delegate of the Society to the meeting of the California Medical Association at Oakland, April 26 to May 1. Several other members who attended some meetings reported on various papers.

Doctor Sippy, District Health Officer, reported on the

smallpox situation, mentioning also the hearty co-operation and wholesome attitude of business and professional people relative to vaccination.

The chairman introduced Doctor Kerr, Professor of Medicine at the University of California, who spoke on the subject "Treatment of Heart Disease." The doctor stated that the beginning of all treatment is diagnosis; it may, therefore, be well to consider first, some of the fundamental principles underlying the diagnosis of the many usual cardiac diseases. If one has a clear conception of these principles, the diagnosis of the individual case becomes comparatively easy. Kerr gave the following classification, which affords a most excellent basis for diagnosis and treatment of the individual patient:

1. Congenital heart lesions manifesting themselves early in life.
2. Rheumatic heart, following fever, St. Vitus dance, tonsillitis, etc.
3. Degenerative heart disease or atheromatous group or arteriosclerotic heart, involving vessels of heart, brain and other organs.
4. Such as are due to disturbance of cardiac innervation, thyrotoxicosis, pericarditis, etc.
5. The renal heart.
6. The syphilitic or luetic heart.

These diseases occur at different periods of life; the syphilitic heart occurs in the "forties"; the rheumatic heart in young adults between 20 and 30; the degenerative and renal heart occur in middle adult life; congenital heart occurs very early in life.

As to treatment, a slight cardiac enlargement or murmur does not mean that medication is necessary. Heart failure is that condition when the heart and bloodvessels cannot carry on the circulation. It is congestive heart when the heart muscle itself fails; here we have shortness of breath, heart pains, generalized stasis of all organs, including kidneys and edema everywhere. Prompt treatment in the congestive group is most important.

1. Bed rest; make patient comfortable; place in sitting position with back-rest or pillows; the bed should not be too soft; a board may be put across in front of patient so that patient can lean forward; he may sleep in that position. First two nights, morphine may be given; it is not dangerous unless there is hypertension or a tendency to Cheyne-Stokes breathing; remove fluid from chest.

2. Depletion; limit fluid intake; omit salt, tap abdomen. Epsom salts, one ounce each morning; be cautious about it. Sodium phosphates, calomel, blue mass or diuretics may be used. Know the indication for digitalis in irregular heart, etc.; know the strength and action of the drug and look for the physiological effects. Digitalis in small doses is of little use. It is safer and better to give the simple drug, the powdered leaves in capsule form, infusion or tincture, rather than the high-priced drugs. Always see your patient before you give the second dose; look for the toxic effects of digitalis. In milder cases, quinidin is of value with less rest, or definite time for rest. In degenerative heart diseases, small doses of digitalis may be given for long periods. In syphilitic hearts without involvement of aorta, arsenicals are not necessary; mercury is better. In early aortitis and aneurysm, salvarsan does most good. Syphilis is a great dilation; it widens the aortic arch and weakens the aortic wall. In angina pectoris it has recently been shown that pain is not an indication of the dilatation of the heart. Nitrites, diuretic, and the iodides are good therapy. Liver extracts are useful in hypertension. A Chinese drug allied to adrenalin increases blood pressure and, in contrast to adrenalin, maintains it for hours. It is useful in Addison's disease, and the low blood pressure of asthma, hay-fever, and neurasthenia. Cardiac irregularities, as paroxysmal tachycardia where the whole heart beats rapidly and regularly, 160 to 270 per minute. In auricular flutter, the auricles beat 250 to 300 per minute; ventricles do not respond, and beat 125 to 150 per minute; heart may beat regularly or irregularly. In auricular fibrillation, the beats may be 600 to 900 per minute, and the ventricular beats 90 to 170; it is always irregular. All these cardiac irregularities may come on suddenly and stop suddenly. Quinidin and quinine are the drugs to use in these con-

ditions. Quinine 5 to 8 grains a day. It may also be given intravenously. Quinidin sulphate grains 3 by mouth if no untoward symptoms arise, such as quininism. It may be given up to 6 grains until attack stops. Quinine sulphate 2 grains and strychnine sulphate grains 1/30 capsules three times a day is excellent in auricular fibrillation; strychnine controls the extra systolic.

If goiter can be treated, the heart may become normal; other drugs useful in cardiac conditions are camphor, ether, and strophanthus.

A lively discussion followed and many questions were asked, which the doctor answered in a very instructive way.

The chairman introduced Dr. D. F. Ray, an old member of our Society, who read an interesting paper on the "American Heart Association." He encouraged the members to join it, to assist in the study of heart diseases and in the prevention of the same. All the members appreciated Doctor Ray's excellent paper, and Doctor Kerr in discussing the paper stated that he concurred in what the speaker had said and pointed out that the great purpose of the Heart Association was research to ascertain the causes of heart diseases and the prevention of the same.

There being no further business, Dozier moved that the Society adjourn. The motion was seconded and carried.

### SANTA BARBARA COUNTY

**Santa Barbara County Medical Society** (reported by Alex. C. Soper, Jr., secretary) — The May meeting was held at Lompoc May 17 as the guests of the Lompoc Chamber of Commerce, the arrangements being in the hands of the local members of our society. Vice-President Henderson occupied the chair, and fifteen members, three interns, Dr. Thomas Shorkley of Carpinteria and Dr. Alec Harrison of the County Board of Health were present, as well as the three physicians from Los Angeles who made addresses.

The meeting was called to order at 4:25 p. m. in the Library Building; the minutes of the last previous meeting read, approved, and ordered filed, and the following addresses made:

"The Relation of Proctology to Other Branches of Medicine," by William H. Daniel, Los Angeles.

"Cosmetic Surgery and Medicine," by Herbert O. Barnes, Los Angeles.

"The Role of the Corpus Luteum," by Michael Creamer, Los Angeles.

Discussion was participated in by Doctors Ullman, Lewis, Sansum, Jones, Cummings, and Bakewell.

By vote of the Society the sum of \$100 was ordered sent to the Gorgas Memorial from our treasury, and the secretary-treasurer elected to the position of county representative of the fund.

Voting on new members resulted in the admission of Robert A. Hare and Edward L. Markthaler of Santa Barbara.

Correspondence was read from the Scientific Service Bureau of San Francisco, the San Francisco Polyclinic, the California Medical Association, regarding public health officers and the degree of Dr. P. H., and from the American Birth Control League offering the services of James F. Cooper for an address; in this last matter, after some discussion, it was voted to invite Doctor Cooper here if not too late for his scheduled tour.

At 6:30 the meeting duly adjourned, and the members proceeded to the Foresters Lodge Building where supper was served with the Chamber of Commerce, and the time spent in "stunts" and stories and singing until 9:30.

### SISKIYOU COUNTY

**Siskiyou County Medical Society** (reported by S. S. Kalman, secretary) — The annual meeting of the Siskiyou County Medical Society was called to order by President C. C. Dickinson in the office of Charles Pius, Yreka, May 10, 1926. Minutes of previous meeting read and approved. Six were in attendance. Those present were: R. H. Heaney, C. W. Ankele, C. C. Dickinson, S. S. Kalman, F. B. Lucas, Charles Pius. Doctor Dickinson spoke

on the usefulness of new drugs in general practice, which was discussed by the members present. The meeting accepted Dickinson's proposal regarding future educational program. Members will be notified in alphabetical order to present a paper on subjects of general interest in the coming meetings. Members will be notified what the subject will be, and everybody will be obliged to take part in the discussion.



### TULARE COUNTY

**Tulare County Medical Society** (reported by H. G. Campbell, secretary) — The regular monthly meeting of the Tulare County Medical Society was held at Motley's Cafe in Visalia May 2, 1926, following dinner at 7 p. m.

The Society had present as guests the dentists of Tulare County, there being eighteen present. The following members attended the meeting: Doctors Lipson, Groesbeck, Bond, Tilletson, Weddle, Paine, Betts, Campbell, Preston, Ginsburg, and Banks.

The meeting was called to order at 8 o'clock by President Betts. He dispensed with the reading of the minutes of the last meeting.

Dr. Frank Simonton of the University of California Dental College was present, and spoke on the subject of "Pyorrhea." Following this the subject was informally discussed by all present.

This was certainly one of the most enjoyable and instructive meetings the Society has held for some time, and it was moved and unanimously carried that a vote of thanks be given Doctor Simonton for his address.

Meeting adjourned at 10 o'clock.

### CHANGES IN MEMBERSHIP

**New Members**—Nolton N. Ashley, Charles E. Mooser, Charles C. Morison, Oakland; Frederick G. Clark, H. Robert Dykes, Taft; G. H. Armen, Harry B. Breitenman, Walter H. Boyd, Robert H. Fagan, Hans H. Gerisch, Claude G. Greengo, Clarence C. Hopkirk, George F. Koetter, George Parrish, Louis Reinard, Maurice W. Rosenberg, Donald E. Ross, Alonzo N. Timon, Frances C. Turley, Hewitt A. Waggener, Olander E. Wald, Los Angeles; Harold F. Mowat, Wilmington; Arthur P. Stevenson, Torrance; Harrison M. Pierce, Riverside; William H. Rosenau, Banning; James A. Warburton, North Sacramento; Angeline Martine, San Diego; W. L. Garth, La Jolla; Mark A. Glaser, Frederick G. Linde, Masa A. Harada, Madeline T. Marlowe, San Francisco; Emily H. Emery, Vallejo; Hiram R. Palmer, Lindsay.

**Transferred**—Leslie F. Herrick, from Alameda County to Napa County.

George S. Iki, from San Francisco County to Sacramento County.

J. M. Scanland, from Napa County to San Francisco County.

Mark C. Myers, from Orange County to San Francisco County.

**Deaths**—Brownsill, Edith Sara. Died at Berkeley, April 26, 1926, age 54. Graduate of the University of California Medical School, 1904, and licensed in California the same year. Doctor Brownsill was a member of the Alameda County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Cross, Charles. Died at San Francisco, March 24, 1926, age 56. Graduate of Cooper Medical College, California, 1895, and licensed in California the same year. Doctor Cross was a member of San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Reily, John A. Died at Patton, May 14, 1926, age 51. Graduate of the Homeopathic Medical College of Missouri, 1898. Licensed in California in 1909. Doctor Reily was a member of the San Bernardino County Medical Society, the California Medical Association, and the American Medical Association.

Rose, John Montague. Died at San Francisco, April 19, 1926, age 58. Graduate of the College of Physicians and Surgeons, San Francisco, 1912, and licensed in California the same year. Doctor Rose was a member of the



San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

**Schafer, Augustus Francis.** Died at San Francisco, April 29, 1926, age 62. Graduate of Bellevue Hospital Medical College, New York, 1887, and licensed in California the same year. Doctor Schafer was a member of Kern County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

#### GEORGE HENRY AIKEN

1845-1926

George Henry Aiken, M.D., died at his home, 315 North Van Ness Avenue, Fresno, California, April 12, 1926, at the ripe old age of 81 years, having been born January 6, 1845, at New Ipswich, New Hampshire.

He had been a resident of this city since 1891, and belonged to numerous organizations, including the Fresno County Medical Society, the British Gynecological Society of London, the San Jose Valley Medical Association, and the California State Medical Society, of which latter he was for many years a member of the governing council. As a member of the Council, he distinguished himself by his high ideals and Christian charity toward his erring brethren, and was deservedly popular with his fellow-members of the Council.

Doctor Aiken was also a member of Atlanta Post of the Grand Army of the Republic and United States Pension Examiner. He was a prominent member of the Masonic order and of the Fresno Commandery of Knights Templar. For over twenty-five years he was local consulting surgeon of the Santa Fe Railroad.

As a boy of 9 years he began to earn his own living, and at the age of 12 years he decided to become a physician. Later on, and before entering medical college, he insured his life in order to borrow money to meet his expenses in acquiring his medical training, and in 1866 he began the study of his chosen profession, finally taking his degree in Medicine at the College of Physicians and Surgeons (Medical Department of Columbia University), New York, in 1869.

He had previously joined the medical corps of the Tenth New Hampshire Volunteers, in which he served throughout the Civil War. His two brothers, members of the same regiment, were killed in battle. When Richmond fell before the victorious Federal troops he was among the first to enter that city on the memorable April 3, 1865.

Doctor Aiken began the practice of medicine in New York City in 1871, but after a failure of his health he moved to Jackson County, southern Oregon, where he remained until 1887 in the active country practice that fell to his lot. In this year he went East and took a post-graduate course in New York City, but not being satisfied with his accomplishments he went on to London, where he spent another year in medical and surgical work and study. Returning to the United States in 1888, he came on to California and located and entered the practice of his profession at Oakland. He remained in Oakland for about three years, at the end of which time in 1891 he removed to Fresno, in which place he lived until death claimed him.

One of his contributions to the welfare of Fresno was the establishment of sanitary regulations in the dairies supplying milk and cream to the city of Fresno. To Doctor Aiken, more than to any other man, is due the credit of giving to Fresno "Grade A" milk, which has proved an untold boon of health to our thousands of children. For a number of years, while he was secretary and executive officer of the city Board of Health, he labored, in season and out of season, against the ignorance and prejudices and cupidity of the producers of milk as no man has labored before or since. He seemed even to be the only man on the health board who realized the great importance of the work he was engaged in. Coincident with the adoption of his regulations of the dairies by the health authorities, there was shown a marked decline in the prevalence of infantile intestinal diseases in the vital statistics of this reporting area. And at the last day when "the books are opened" there will

be hundreds, yes, thousands, of Fresno's children rise up to bless Doctor Aiken for the crowning work of his life. And, indeed, it was the crowning of his life's work. He was at work in the health office at the time of his physical collapse. He resigned his place on the health body, closed his private office and retired to await the end, which came a few short years after he ceased activities.

Doctor Aiken's popularity among the members of his profession, locally and throughout the state, was well deserved. He was distinctly a high-class citizen who stood for the best in life not only in his profession but in the civic life of his community, the state, and the nation.

His remains were laid to rest in the Fresno mausoleum in Mount View Cemetery, April 14, 1926.

He is survived by his wife, Mrs. Ida M. Aiken of Fresno, and a daughter, Mrs. True Aiken Stern of Los Angeles.

#### ALBERT C. ZAISER

1873-1926

To the Officers and Members of the Orange County Medical Association:

Again the hand of death has laid low an esteemed member, Albert C. Zaiser, a victim of apoplexy, after suffering three years with paralysis. He died April 4, 1926, aged 53 years.

In 1920 Doctor Zaiser came to Santa Ana from Burlington, Iowa, in the very prime of his manhood, a surgeon of ripe experiences and splendid ability. From the hour of his coming his success was assured, but scarcely three years passed before his professional career was terminated. Although he was with us but a short time he won the respect and admiration of his associates. We therefore submit the following resolutions and a brief sketch of his life, with the request that they be made a part of the minutes of the Association and a copy of the same be sent to his family:

Albert Charles Zaiser, M.D., Santa Ana, California. Born, Burlington, Iowa, May 18, 1873. Died April 4, 1926. Education: High School, Burlington, Iowa; Orchard City Business College. Then clerked in a wholesale drug house, 1890-93. Studied pharmacy Iowa State University, Ph. G., 1895; Medicine, Omaha, one year, and St. Louis College Physicians and Surgeons until graduation, M.D., 1896. In practice in Burlington, Iowa, from graduation to 1920, when he came to Santa Ana. Practice limited to surgery. In 1923 ill health compelled him to retire from practice. California certificate, 1920. Admitted O. C. M. A., 1920. Also member California Medical Association and Fellow of the American Medical Association. Mason. Methodist. Married Grace Melcher January 1, 1901. One son.

RESOLVED, First, that the members of the Orange County Medical Association, of which the deceased was a member, sincerely mourn his death.

RESOLVED, Second, that the sympathies of all the members of the Association are hereby extended to the wife, son, and other members of the family of our respected colleague.

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The general practitioner, whose field covers more or less the entire scope of medical work, is in no branch so profound or erudite as his confrère the specialist. One of his important functions in treating disease is to know his own limitations, and to recognize as early as possible when and where he needs help; then to secure it. His intellectual capacity, indeed his intellectual achievement, is often as great as, if not actually greater, than that of the man whom he summons for counsel. His importance to the patient should be greater without question. Nevertheless, too frequently the specialist approaches him with the air of a deity descending from Olympic heights to converse with a mere mortal.—Journal Medical Society, New Jersey.

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Imagination adds value only when it conforms to the nature of things. When it seeks easy consolation in delusions it shirks the only possible mastery of life, which is through the conquest of reality.—Antioch Notes.

## UTAH STATE MEDICAL ASSOCIATION

T. C. GIBSON, M. D., Salt Lake City.....President  
W. R. CALDERWOOD, M. D.....President-Elect  
FRANK B. STEELE, M. D., Salt Lake.....Secretary

J. U. GIESY, M. D., Kearns Building, Salt Lake,  
*Associate Editor for Utah*

### THE ANNUAL MEETING

By the time this is in print the 1926 State Association meeting will be history, and one trusts that it will linger in the minds of those who attended as a pleasurable event.

Once more our thanks must go to the University of Utah for furnishing Stewart Hall as the lecture auditorium for the major part of the program, and to the visiting lecturers who helped to make it the success it was.

The best part of these meetings, of course, is the get-together spirit they develop, and the resultant stimulation of the spirit of study and research. Sitting under the discourses of men of proven ability, grasping so far as one may the facts and theories which they voice for our consideration, one can scarcely fail to feel his interest quicken, his ambition of emulation awake, or to experience a little thrill of pride in the demonstration of the progress being made by those who devote their lives to the betterment of the healing art.

Such things as these and the meeting of old friends, the renewing of old associations, the friendly handclasp, and the cheery word, make of such annual meetings very enjoyable occasions indeed. For "It's always fair weather when good fellows get together"; and, of course, there was the banquet.

Utah News (reported by J. U. Giesy)—The medical men of the state extend their sympathy to President T. C. Gibson of the State Association in the death of his brother in California during April.

Dr. L. P. Bell of the Woodland Clinic, California, gave a talk on the subject of "Obstructive Jaundice" before the Wasatch Academy of Medicine on the night of Wednesday, May 5. Bell was also a lecturer at the annual session May 6, 7, 8.

During the state meeting Mrs. T. C. Gibson, wife of the retiring president, entertained the ladies of the auxiliary and the visiting ladies at tea in the president's suite at the Hotel Utah. The rooms were beautifully decorated in native tulips, and refreshments were of a novel type. Mrs. Gibson was assisted by a corps of assistant hostesses from local physicians' families.

#### Banquet Chop Suey

Dr. Munyon (you know what I mean if you were there).—A little gargle now and then is relished by the best of men.

Dr. Wells, Chicago—I refuse to *monkey* with the interstitial glands. Anyway there is no safety in Chicago.

Dr. Galligan—"C'est dommage"—means "So's your old man." Ain't it a pity?

Dr. Jacobson, Chicago—Relax.

Major S. C. Gurney—I've ridden with the Prince of Wales off and on.

Dr. William (Bill) Donohur—My niblick for an—alibi.

Dr. John Sharp—A few cutting remarks.

Dr. Smith, Ogden (president-elect)—I am in the hands of my friends.

Dr. Coffey, Portland—I can—cer (can sir).

Dr. Tiffin, Portland—The race is now between the

appendix and the thyroid. Nobody wants it to be a dead heat.

Dr. Jellison—A mashie is an instrument used after a man has lost his ability as a masher.

On April 28 the Advisory Committee to the University of Utah Medical School met at the university on the call of Chairman Goeltz for the purpose of making its annual inspection of the medical department of the university. Under the guidance of Dean Porter, a tour of the medical school was made and each department carefully inspected. Great improvement in the condition of the school both as to facilities for instruction and increased teaching staff was noted as compared with the previous year. The recent innovation in the department of anatomy of using compressed air as a means of demonstrating the various tissue planes and the hollow viscera proved of interest to the committee, as did the pharmacology laboratory in which they witnessed classes at work on animal experiments. Luncheon was served at noon and was followed by a discussion of the inspection of the morning. It was decided that, although conditions of the medical school as a whole were greatly in advance of last year and showed a gratifying result for the unceasing work of Dean Porter in his efforts to build up this part of the state institution, there was still need of a greater financial support for this department and that a report stressing this fact should be made to the House of Delegates of the State Medical Association, with a recommendation that steps should be taken to seek a greater financial appropriation from the next Legislature.

Salt Lake County Medical Society—Abstract of report of the Committee on Public Health Legislation:

On January 10, 1926, your committee, together with the committee of the Utah Public Health Association, and Mr. James H. Wallis, secretary of the Utah Public Health Association, met at the office of the chairman. Drs. H. G. Merrill, Heber J. Sears, L. E. Kiko and Mr. James H. Wallis, each one in turn, explained to us the objects and workings, in detail, of the association, both in Salt Lake City and the state of Utah. At that meeting we had a stenographer present who took notes and a transcribed copy of the minutes was given to Dr. T. B. Beatty, secretary of the State Board of Health, who was requested to report in writing his explanation of the statements made and anything else he felt the committee should know.

On January 24 we met with Mr. George D. Keyser, president of the Utah Public Health Association, with whom we discussed the subject in general, and were invited to confer with Mr. Keyser and the secretary of the Utah Public Health Association at the association's office in the Capitol Building at 7:30 p. m., January 25. At that conference we met Dr. Herbert R. Edwards, medical field secretary of the National Tuberculosis Association, who informed us that he was here for the purpose of investigating the Utah Public Health Association, and also to map out a five-year program for the association. Mr. Keyser and his secretary were very courteous, and showed us books, checks, vouchers, with all reports, and in every way assisted us in learning the details of the association. We are not public accountants, neither are we expert bookkeepers, but we learned enough to satisfy ourselves that the finances of the association are being well guarded at this time and that no money can be spent without checks being countersigned by Mr. Keyser, who introduced a budget system in June, 1925, since which time advertising for bids for any and all supplies has been required.

From our examination and the knowledge we have gained since beginning this investigation, we feel convinced that everyone connected in any manner with the Utah Public Health Association is enthusiastic and active in his work.

The further we went in this examination the more we learned that our work could not be confined to Salt Lake County but that it necessitated our taking in the state of Utah, together with information to be obtained from the entire United States.

On January 28 we sent a letter of inquiry to forty Utah physicians, excluding Logan, Ogden, Salt Lake, and Provo.

From the replies received we learned that there was



much chaos and misunderstanding between physicians and the public in reference to public health lectures and work in our state. We learned that the secretary of the State Board of Health, the Utah Public Health Association, the Utah Agricultural College, C. N. Jensen, State Superintendent of Public Instruction, and many others were very active in teaching or attempting to teach health to the public. In order to ascertain how much of this work was being performed by other organized agencies of the state of Utah besides the State Board of Health, we sent another letter of inquiry to C. N. Jensen, State Superintendent of Public Instruction; Dr. George Thomas, president of the University of Utah; and Dr. E. G. Peterson, president of the Utah Agricultural College.

The reply from the Utah Agricultural College, signed Vera Carlson, secretary to the president, stated: "The health program as conducted by the Extension Service is directed at the building of positive health in the family group through proper food, clothing, sanitation, mental attitude, and recreation. Their work takes nothing of the clinic, diagnostic and curative phases. They follow closely outlines as given by the National Women's Foundation for Health and use the publications of the United States Department of Agriculture in its national extension program."

From other letters received by the committee we are reliably informed that the Utah Agricultural College has nurses in the field doing public health work not under the supervision of the State Board of Health.

The taxpayers of the state are groaning under the heavy burden which they carry. Your committee fails to see why the Agricultural College does not confine itself to its own peculiar problems as an agricultural college and leave the problems of public health to the regularly constituted health department of the state.

Superintendent C. N. Jensen in his reply to our letter stated that the following resolution had been passed by the Utah State Board of Education:

"That the public schools of the state place greater emphasis on health education and that wherever possible boards of education employ school nurses."

He further stated that "districts which employ nurses are receiving much-needed help; districts which are not employing nurses, through lack of funds or otherwise, are being deprived of that aid which would make much more effective the health work in their schools."

Your committee recommends for your consideration that these nurses be selected only on the approval of and be directed in co-operation with the State Board of Health.

President George Thomas, University of Utah, in his reply stated: "Since June, 1925, we have not done any regular state health work. We thought for the time being it was better to take the money devoted to public health and strengthen up our medical school."

About three years ago Doctor Thomas appeared before the profession and asked for their assistance and support. The president of the Utah State Medical Association appointed a committee known as "The Advisory Committee" to the medical department, University of Utah, and the succeeding presidents have continued this committee. From this contact Doctor Thomas acquired a better knowledge of the medical viewpoint and their reason for opposing the volunteer health work which was being carried out by the extension department of the University of Utah. The committee desires at this time to commend Doctor Thomas for his efforts and co-operation, and bespeak for him its continued support.

The Utah Public Health Association has four nurses in the field who are stationed at specified places and give health instruction. They receive their salary from three combined sources: the Utah Public Health Association, the local School Board, and County Commissioners, each paying one-third. The Utah Public Health Association directs the work.

The Utah Public Health Association has a secretary who receives a salary of \$3000 a year and expenses when in the field; also a man who drives the truck, shows moving-pictures and gives lectures, and who receives a salary of \$1500 annually and expenses. The secretary is in the field a large part of his time. The man who drives the truck and shows the moving-pictures is in the field practically all the time. They have a secretary and

an assistant in the office at the Capitol and the four part-time school nurses in the field.

The Utah Public Health Association does not confine its work to tuberculosis but gives instruction, so they state, in general health matters. They distribute, pamphlets and literature on the subject to school children, distribute cards which are known as "The Modern Health Crusade," and give them general advice. The children report at regular stated intervals to show they have carried out these instructions. The brushing of teeth is stressed and they are scored according to replies made to questions, and are given honorable mention in public according to merits.

From the February issue of CALIFORNIA AND WESTERN MEDICINE under the caption "With the Editor" we glean the following:

"One toothbrush to each three persons (35,000,000) was sold in the United States last year. Allowing for the reasonable allotment of three brushes a year, it would seem that at most some 10 per cent of our people use toothbrushes. Aside from the question of the health virtues of the toothbrush, the fact that all the active propaganda almost every agency of society could put forth induced only 10 per cent of the population to practice a cheap, simple habit of cleanliness, makes one wonder about the effectiveness of much of the health education just now so popular."

From our conversations with Doctor Edwards and from the replies received to our letters addressed to the secretaries of state boards of health and secretaries of tuberculosis associations, we find that in some states there is complete co-operation. In certain instances the secretary of the State Board of Health is also the secretary or at the head of their State Tuberculosis or Public Health Association, resulting in complete harmony. In many other states this co-operation and harmony does not exist.

In the Journal of American Medical Association, February 20, 1926, page 562, Doctor Williams, managing director National Tuberculosis Association, announced February 12, 1926:

"... that the recent sale of Christmas seals totaled \$4,750,000. The anti-tuberculosis campaign this year will emphasize closer co-operation between voluntary tuberculosis agencies and official agencies. The annual business meeting of the state secretaries, at which this announcement was made, was held in Chicago."

From Williams' own statement herein contained you will notice that co-operation between voluntary tuberculosis agencies and official agencies does not exist to the saturation point or to the point desired by Williams.

In three Utah counties the State Board of Health has established so-called health units. These health units consist of a full-time health officer, a full-time public health nurse, and in one county a staff of inspectors. If one city or county cannot encompass the financial part, the State Health Commissioner endeavors to combine two or more. If it is a question of finances, assistance is procured from the Internal Health Board, a branch of the Rockefeller Foundation.

From the replies received from the physicians in Utah we learned that the name "Utah Public Health Association" causes much confusion. The name simulates "Utah Board of Health" so closely that members of the medical profession do not appear to know the difference when one or the other is in the field. One of our committee has criticized the State Board of Health for not having a special uniform for all of their assistants, thus making it possible for people to recognize when organized health authorities of the state are in their midst and distinguish them from volunteer organizations.

Any person who has held a public office for a period of years has made political enemies, for the reason that if anyone has a pet idea and the official does not fall in with the idea it is thought that he does not understand his business, and the secretary of the State Board of Health is no exception to the rule.

The committee has had a number of meetings with our State Health Commissioner, and thus received an intimate knowledge of the present objects and aims of the State Board of Health. We feel that if the members of

our profession should become better acquainted with the workings of the State Board of Health the result will be with all of you as it has been with us: there would be more whole-hearted support, for they are doing a fine work. As it is, they are being hampered at every turn by one or the other of these voluntary health organizations. It appears from our investigation that there is some complaint of friction in the contact between voluntary organizations and the State Board of Health. We are not included to pass upon the merit of such complaints. If, as a matter of fact, there be friction, it could probably be eliminated by having the contact work carried on by committees representing the voluntary organization on the one hand and the State Board of Health on the other.

The Utah Public Health Association states that its work is entirely educational. It is very difficult to measure the results of such work, just as it is difficult for a firm to measure how much benefit they derive from a particular piece of advertising. The association collects annually upward of \$20,000 in Utah. On two occasions they collected \$27,000. This money is, as far as we can learn, spent each year. A public accountant might segregate the expenses and show how much in his opinion is overhead and how much is for seals, how much for other expenses, but to us it appears, from our way of figuring, that it is all overhead. They spend all they collect each year.

In 1923 former Governor Mabey appointed an impartial committee to investigate health activities in the state of Utah. This committee was made up of Lincoln G. Kelly, a certified public accountant; former State Senator Carl A. Badger; and Dr. B. W. Black of the United States Veterans' Bureau. After making a thorough investigation of these conditions, under date of February 7, 1923, they made the following recommendations:

1. That all public health activities now being performed by the Department of Agriculture be placed under the direct administration of the State Board of Health.

2. While it is clearly the function of the State Board of Education to provide for the instruction of health education to children of school age, it is felt that the maintenance and preserving of the health of the child and the responsibility for health conditions in the schools should rest with the State Board of Health as now provided by law.

3. All public health activities undertaken by the State University and the Utah Agricultural College should be undertaken only upon approval in co-operation with the State Board of Health, and if necessary to provide for this approval, legislation should be enacted to cover same.

4. All volunteer organizations whose activities are devoted to public health work should function in co-operation with or under the direction of the State Board of Health.

In our state where the legislature is not in a position to appropriate sufficient funds for the carrying out of an elaborate health program such as conditions of society today require, we feel there is room for such an organization as the Utah Public Health Association.

From our correspondence your committee feels that the money received from the sale of Christmas seals is not expended to the best advantage to the citizens of Utah. We are of the opinion that all field work by the Utah Public Health Association as now being conducted should be discontinued, and that the money being expended for field work should be used, after full discussion and co-operation with the State Board of Health, in such manner as will do the greatest good.

We, your committee, recognize the value of volunteer health organization work and are not disposed to discourage it as such. We recommend that all voluntary health organizations in this state should be supplementary to the legally constituted State Board of Health, and that they should work in co-operation with and under the direction of the State Board of Health, that the funds which they receive through the sale of seals or other sources should supplement the funds appropriated for health work by the State Legislature.

Until such time as this can be consummated, we recommend that the medical profession withhold their moral

and financial support to any and all volunteer health agencies.

Committee: Sol G. Kahn, chairman; John Z. Brown; C. M. Benedict, secretary.

Read April 26, 1926.

The following officers were elected for the ensuing year: John Zimmerman Brown, president; Frank Lowe, vice-president; Nymphus Hicken, secretary-treasurer.

**Salt Lake County Medical Society** (reported by M. M. Critchlow, secretary).

**Meeting of April 26, 1926**—The regular meeting of the Salt Lake County Medical Society was held at the Commercial Club, Salt Lake City, Monday, April 26, 1926, President F. H. Raley, presiding. Sixty-three members and six visitors were present.

Minutes of the previous meeting were read and accepted without correction.

C. W. Middleton presented a case of scoliosis of the dorsal spine treated by body cast.

L. N. Ossman presented a case of suppuration of knee-joint following shrapnel wound with perfect results.

The first paper on the scientific program entitled "Diagnosis of Peptic Ulcer" was read by Fuller B. Bailey. He stressed the history, laboratory findings, and examination, with the idea of making the diagnosis before x-ray examination.

This excellent paper was discussed by John W. Sugden, G. G. Richards, and J. P. Kerby.

Burton W. Musser talked about the Community Chest for ten minutes.

LeGrande Wooley read a paper on "Heart Disease as a Complication of Pregnancy." This paper was based on his own series of cases. He urged very careful treatment in pregnant heart cases.

This very interesting paper was discussed by R. T. Woolsey.

J. C. Stokes of Bountiful was unanimously elected to membership in the Society, thirty-seven members voting.

A communication was read from the American Medical Association suggesting that Senator King be requested to disapprove the bill before the House of Representatives which would prevent animal experimentation.

Sol G. Kahn moved that a committee of three be appointed to urge Senator King to not support this bill. Seconded and carried.

President Raley appointed S. D. Calonge chairman of the committee, and W. F. Beer and A. A. Kerr the other members.

Sol G. Kahn read the report of the Committee on Public Health and Legislation, in which it was recommended that all voluntary health organizations should be supplementary to the State Board of Health, and until this can be consummated that the medical profession withhold their support from any and all volunteer health agencies.

Sol G. Kahn moved the adoption of the report. Seconded by John Z. Brown. Discussed by W. F. Ber, W. R. Calderwood, A. A. Kerr, and L. N. Ossman. Motion was carried.

C. M. Benedict announced changing the date of the medical banquet.

**Meeting of May 10, 1926**—This meeting was held at the Commercial Club, Salt Lake City, and was called to order by President F. H. Raley, with thirty-eight members and three visitors present.

Minutes of the previous meeting were read and accepted after being questioned by D. G. Edmonds.

There were no clinical cases.

The scientific program comprised a symposium on "The Chronic Rheumatic." Etiology was very thoroughly discussed by Frank D. Spencer. W. R. Tyndale took up the diagnosis and illustrated his points by lantern slides and x-ray films. C. L. Shields described the treatment. These three men made the symposium extremely interesting.

The papers were discussed by James P. Kerby, A. A. Kerr, G. N. Pace, and L. E. Viko.

The secretary read the applications for membership of L. E. Gowney, Thomas J. Welsh, A. N. Leonard,



C. Ralph Cornwall, and the application for transfer from Utah County of O. Sundwall.

President Raley read a communication from Stuart Pritchard of the Battle Creek Sanitarium who has done special work on bronchiectasis, and who would be in Salt Lake City on May 28. He announced that a special meeting would be held on that date.

**Immunization Against Diphtheria**—It has been found that soaps—chiefly of the unsaturated fatty acids—and preferably sodium ricinoleate, detoxify bacterial toxins, with the exception of botulinic toxin, and that such soap-toxin mixtures are antigenic. Having found that experimental animals, as rabbits and guinea-pigs, may be immunized with such detoxified toxins, W. P. Larson and Howard Eder, Minneapolis, tried them on human subjects. It was found that solutions of highly purified sodium ricinoleate caused no reaction other than a slight burning sensation at the point of injection, which lasted only a few seconds. Diphtheria toxin-soap mixtures were then injected into a group of laboratory workers who had been found to be Schick positive, each subject receiving 0.125 L + toxin in a 1 per cent soap solution in a total volume of 1 cc. The injections were followed by a mild local reaction, which followed the course of an ordinary positive Schick test. Later, 2 per cent soap solutions were used and the injection was made intramuscularly; in this way, the reactions have been eliminated. The use of sodium ricinoleate as the detoxifying agent eliminates the danger of sensitization to foreign substances, since it is not antigenic. Whatever the technic of antidiphtheritic vaccination may be, it is imperative that the injections cause little or no reaction. The sodium ricinoleate method of modifying the toxin is equal to antitoxin in this respect. After having satisfied themselves that diphtheritic toxin-soap was fully equal to, and in many respects superior to, toxin-antitoxin as an immunizing agent, Larson and Eder felt that they should thoroughly investigate the possibility of immunizing with one treatment and, further, to determine the optimal interval between treatments for the best results, should repeated injections seem necessary. In one group, immunity developed in 38.5 per cent of cases within five weeks following one injection. In another group, 66.6 per cent became negative to the skin test in eight weeks. This was undoubtedly a particularly favorable group, since only 52 per cent of a larger group gave a negative test after twelve weeks. However, the fact that a 1 per cent soap solution was used instead of a 2 per cent may be a factor. Repeating the number of injections does not seem to increase the number of negative skin tests within the first twelve week period. Out of a group of twenty-three subjects given two injections at an interval of seven days, only 47.8 per cent gave negative tests twelve weeks from the time they received the first treatment. Retests which are now under way indicate that the percentages of negative skin tests will be very much higher at the end of the six-month period. On the basis of these results, the authors do not hesitate to recommend the sodium ricinoleate method as safe and effective in immunizing against diphtheria.

The theory that the end products of protein catabolism are renal irritants and by relieving the kidney of the necessity of excreting these products the organ is rested, has been one of the principal reasons why protein has been so restricted in nephritic diets. In addition to this the production of nephritis in rabbits by diets containing excessive amounts of protein has been interpreted as a support of this theory. In recent literature, however, there is an indication that many internists are beginning to believe that the restriction of protein in the treatment of renal diseases has been carried to an extreme that is not adequately justified.—*International Medical Digest*, April, 1926.

An enterprising gum manufacturer has added iodine to gum, presumably with the idea of giving the gum-chewing damsel with goiter an opportunity of obtaining treatment in an agreeable way.—*Journal Indiana Medical Association*.

## MEDICAL, HEALTH AND HEALTH AGENCY NEWS

The Dean of Stanford University Medical School has announced the appointment of Arthur L. Bloomfield of Johns Hopkins as Professor of Medicine, effective with the beginning of the year 1926-27.

The tenth annual meeting Pacific Division, American Association for the Advancement of Science will be held at Mills College, California, June 16 to 19, 1926. Persons interested should address W. W. Sargent, secretary, Golden Gate Park, San Francisco.

James T. Watkins, M. D., of San Francisco became



president of the American Orthopedic Association at the recent session of that organization in Atlanta.

The Federated Women's Clubs of California continue active in efforts to improve county hospitals. At the annual meeting recently held in Riverside, reports showed that some counties were adding children's departments to their hospitals.

This is exceedingly important work. Many of the county hospitals do not even deserve the name. In buildings, equipment, organization, and methods of conduct several of them are obsolete. More power to the Federation in its efforts at improvements.

That invitation to doctors to subscribe to a lecture course offered by the Extension Division of a great university and delivered by nonmedically trained teachers on nutrition in health and disease, is causing some interesting comment.

The course is to consist of fifteen hours of instruction, will make a survey of the scientific fundamentals of nutrition, particularly the more recent theories and evidence, with applications to the feeding of infants and children, pregnant and nursing women, fever patients, nephritics, diabetics, and other sick persons for whom dietetic care is indicated.

A committee of American Association of University Professors has drawn up a striking indictment of the game of football, which contains most of the familiar charges against this much discussed activity. Distortion of values, destruction of interest in academic prestige, encouragement of drinking and gambling, are some of the things for which football is held responsible. The only remedies offered are the suggestions that students be limited to one year's play in the course of their college career, and that the number of games with outside institutions be radically reduced.

It is possible that some of the indictments drawn

against football ought to have a broader target. The adulation of physical achievement, hysterical enthusiasm, misplaced emphasis, and unbalanced rewards are to be found in almost every phase of human activity. Perhaps it is not football that should be put on trial, but the human race.—The Outlook.

The perennial political row over the alleged shortcomings of the Fresno County Hospital is again in full bloom. Newspapers are featuring various and sundry stories, and the grand jury is said to be using a "probe."

Fresno County has an able and experienced hospital executive, and he has already served longer than most capable administrators stay in hospitals controlled by county politics. The Fresno hospital is one of the few county institutions to attain recognition by the great medical and hospital organizations.

"Probes" in the hands of people not familiar with the complex problems of hospitals are dangerous weapons; liable to injure the patient and sure to cripple public confidence in a worthwhile humanitarian service.

St. Joseph's Hospital staff, San Francisco, observed "Hospital Day" on May 12 with an interesting program. T. D. Bodkin outlined a case of mitral disease with acute dilatation, and later spoke on "Types of Splenomegaly," describing a patient operated upon with an immense spleen, and a history suggesting malaria, where a probable primary sarcoma (unremovable) was encountered. Samuel Barimak reported cases of pneumonia, induced abortion, secondary anemia, gastric carcinoma, and fracture of skull. W. T. Cummins gave "Echoes of the Medical Conventions," reviewing as follows the annual meetings of the American Society of Clinical Pathologists at Dallas and the State Medical Association at Oakland:

Sickle cell anemia is not rare in the South. A photographic method for recording blood cells was described, and the irrefutable evidence so presented was stressed. The importance of the consideration of normal sugars in urine and of the technics, as well as the exogenous sources of these, were reviewed. A starch-tolerance meal instead of sugar was urged. Frozen section technics should be supplemented by the longer paraffin technics for corroborative diagnoses. The integration of hospital laboratory work embraced an earnest plea for greater co-operation and for the clinician to learn more about laboratory medicine. A study of the x-ray treatment of amebiasis eventuated in moderately beneficial results. A comparison of the Kolmer and Kahn technics showed that the latter does not supersede the former, but that both blood serum tests should be used.

At the state meeting the advantages of the cerebrospinal use of lipiodol were noted in tumors of the cord. The use of emetin in chronic arthritis was recommended with caution in its administration. Acidosis-inducing diets were urged for epileptics. Agranulocytic angina with marked leukopenia and depression of the polymorphonuclears was observed in teeth extraction. Arteriosclerosis in rabbits was induced by diets rich in amido-acids.

Discussing amebiasis, Otto Laist reported but little pain with emetin injections where small doses were used, but G. D. Schoonmaker urged against these insufficient amounts. A. S. Musante discussed abdominal drainage, favoring rubber tubes in appendicitis with rupture before or during operation and cholecystectomy. Aspiration of acute empyemas and approximation of parietal and pulmonary pleurae later were advised. Perinephritis from boils was treated with drainage and sufficed usually.

The program for June 9 follows: "Interesting Points Concerning Neuroses Following Injuries," Joseph Catton; "Recent Results with Mercurochrome," William Quinn, hospital report, including mortalities and collation.

St. Francis Hospital, San Francisco, has New Managing Director—Dr. L. B. Rogers, who has been appointed to this position, received his M.D. from New York University and Bellevue Hospital Medical College, 1905. Graduate study: Intern Bellevue Hospital, New York City, 1905-07. Intern Women's Hospital, New York City, 1907-08. Practice limited to hospital planning, construction, and administration. Previous honors and ser-

vices: In September, 1914, assisted in planning and organizing the American Ambulance in Paris; attending surgeon there from September, 1914, till February, 1915. From February, 1915, to September, 1915, was with the Serbian government in hospital work during the typhus epidemic of 1915. Regimental Surgeon of the Sixty-fourth Infantry, Seventh Division, and served with troops during the Meuse-Argonne offensive and the Saint Mihiel drive. Assistant Division Surgeon and Acting Division Surgeon, Seventh Division. Chief Medical Adviser in Bureau of War Risk Insurance in 1919. District Manager Veterans' Bureau in 1921. Executive Officer and Assistant Director Veterans' Bureau, 1922-23. Medical Director Veterans' Bureau, 1923-24. Commanding Officer United States Veterans' Hospital, New Haven, Connecticut, 1925. Organizations: Bellevue Hospital Society and Woman's Hospital Society, New York; New Haven County Medical Society; Connecticut Medical Society; American Medical Association; American Public Health Association; American Hospital Association.

The French Hospital of San Francisco has recently issued an attractive annual report which contains much information interesting to hospital workers.

Children's Hospital, San Francisco—The graduating exercises of the School of Nursing, class of 1926, took place on the evening of Tuesday, May 18, at the Fairmont Hotel, and was an occasion of unusual interest, as occurring in the fiftieth anniversary year of the founding of the School of Nursing of this old institution so full of tradition and of valued associations for the people of San Francisco in whose hearts the hospital, with its "Little Jim" ward and other interesting departments, has so long held a very warm place.

The evening in the beautifully lighted ballroom of the Hotel Fairmont was brilliant, and the program of exercises an entertaining one. First came the march by the hotel orchestra followed by the invocation pronounced by the Rev. E. N. Van Nuys. A group of songs was then well rendered by Mr. Harold Dana, and the address to the graduating class, given by Miss Mary L. Bently.

J. B. Cutter, director of the hospital, then led the graduating class in the acceptance of the Florence Nightingale Pledge, which was followed by the awarding of diplomas by the vice-president of the Children's Hospital, Mrs. Henry Sahlein.

The presentation of the class pins by the superintendent of the School of Nursing was a pretty ceremony gracefully presided over by Ada Boye, R.N., and the exercises closed with the rendition of a fine musical offering by the Fairmont orchestra.

The following young ladies who have completed their training at the Hospital for Children and Training School for Nurses composed the graduating class who with their friends enjoyed the remainder of the evening in dancing:

Edna Lucretia Bailey, Mildred B. De Armond, Helen M. Duffee, Mary J. Gate, Josephine Lillian Handelin, Edith M. Kerchenfaut, Dorothy Grace Simpson, Dorothy Rose Brooke, Marjory Elizabeth Cathcart, Ione Renvy Glass, Charlotte Grossman, Mae Eugenia Kelley, Florence Evelyn Sorsoli, Grace M. Stahley, Virginia Elizabeth Standley, Olga W. Swanson, Gertrude M. Trank, Sadie Alice Whitehead.

The calling of the first national adult weight conference under the combined auspices of the American Medical Association and the "Delineator" was an interesting movement in the popularization of health for the masses.

A number of prominent physicians and publishers took an active part in the congress, and its results will be published by the "Delineator" from month to month. Here for the first time a great organization of physicians and a popular magazine with millions of subscribers have combined to put over a health program authoritatively so that all who can read may understand.

A little more cultivation of this idea and it will soon be more difficult for the hundreds of thousands who are



making a living out of weight reducing to find audiences of such magnitude.

It is quite likely that there will be other combined conferences on other phases of health between medical authorities and great publishing houses for the production of honest information about health, which we hope will replace the ridiculous propaganda that is now being sent out haphazard.

**E. O. Crossman, Medical Director United States Veterans' Bureau**, has appointed a board of physicians to study the residual effects of war gases.

The study will necessitate the investigation of the present or recent condition of upward of 70,000 ex-service men of whom there are hospital records of having been gassed.

**History of Medicine**—The Committee of the California Medical Association now engaged in the study of the history of Western medicine, California medicine in particular, is making progress.

John W. Shuman, 2007 Wilshire Boulevard, Los Angeles, is actively engaged in the preparation of a history of the Los Angeles County Medical Association.

When all the data which are now being brought together on the development of medicine in the western United States is completed, there will be a splendid opportunity for some one competent to do that work to write an interesting narrative on the most important phases of its development.

The co-operation of all members with the California Medical Association committee, as well as the committees of the various counties, is urgently needed to make this work a success.

**St. Luke's Hospital (San Francisco) Clinical Club** held its regular meeting May 6, 1925, Leroy Brooks presiding. The subject of the day, "The Physiology and Pathology of the Hypophysis," was presented by F. C. Nass. In outlining his subject, he stated that the pituitary gland is one of the four glands of internal secretion that have particularly to do with the physical makeup of a person, especially with his growth. His growth may be affected by heredity, by environment—intrauterine and extrauterine—and by the subsequent workings of these glands. There are six conditions generally ascribed to pituitary disorders. They are: hypophyseal infantilism or dwarfism, or ateliosis; gigantism; acromegaly; adiposogenital dystrophy, with three main clinical types, the Froelich type, the Levi-Lorraine type, and the Neurath-Cushing type; diabetes insipidus; cachexia hypophyseopriva, or Simmonds' disease.

All varieties, grades and combinations of the above, and of these with other glands, especially of the gonads, the adrenals, less often the thyroid, are met with.

The anterior lobe has the only apparent hormone which affects growth, although at times it seems injurious to growth. There is evidence that it has another hormone which affects ovulation adversely. There are cytological and morphological indications of possibly three anterior lobe hormones. The middle lobe, the posterior lobe, the stem, and the region of the tuber cinereum are classified by Biedl as a sort of functional unit, and lesions in either one of these parts can bring on typical disturbance of metabolism, and he assumes that the active principle obtained from the posterior lobe is a middle lobe product. The posterior lobe product affects the circulation, the respiration, the carbohydrate metabolism, and the water and salt excretion by the kidney in a typical way.

Professor Evans and others refuse to consider the middle lobe function and a metabolic center as necessary.

Gentlemen, you are about to enter a noble and difficult profession; your success in it depends upon three things: First, a good and thorough knowledge of your profession; second, an industrious discharge of its duties; third, the preservation of your moral character. Without the first, knowledge, no one can wish you to succeed. Without the second, industry, you cannot succeed. Without the third, even if you do succeed, success can bring you no happiness.—Rudolph Matas, Address to Interns, New Orleans Medical and Surgical Journal.

## READERS' FORUM

Selected short letters and abstracts from longer communications from readers are published when they remain within the bounds of decorum and law and contribute anything of value. Hereafter the name and address of the writer will be given. A pen name will be published on the author's request, and letters to the editor not intended for publication should be marked "personal."

Hermosa Beach, Calif., April 20, 1926.

*Dear Editor:* Many of the physicians in our section are watching with considerable concern the apparent tendency of county health activities toward state medicine. Recently in the adjoining town of Redondo Beach the medical profession made a practically unanimous protest to the city trustees against the encroaching activities of the county health department. Representatives of the women's club and the county health department were present in open meeting and apparently the doctors gained little but a loss in popularity.

A few days later the county health officer met with the Southwest Branch of the Los Angeles County Society at Torrance at which time their difficulties were discussed. The local physicians' contentions and grievances were about as follows:

1. Free baby clinic conducted at the women's club by the county health department gives medical advice and treatment, especially to the well-to-do, there being few poor in attendance. They reach the physicians' patients through the birth registration by sending a nurse to visit new mothers asking them to bring their babies for free advice to the clinic.

2. County health department advertises and gives free vaccination to all. The physicians contend those able to pay should come to the family physician.

3. School nurses give treatment and at times criticize physicians' treatment. They also give out cards of out-of-town physicians.

4. At times the impression is left with families under quarantine by the health department that the family physician is very much inferior to the personnel of the health department. One physician made the remark that he did not think any \$150 per month man was his superior.

In reply the county health officer said in effect that:

1. Baby clinics are not intended for treatment being only educational. He admits they give feeding advice. (One of the physicians in reply says that feeding is 90 per cent of pediatrics. The objection here made by physicians is that through advertising and publicity patients are being weaned away from private doctors.) The health officer replied that there is nothing to hinder local men from running their own free clinic.

2. Free vaccination is a necessary public health measure and that many cultists will come to a public health office for vaccination who would not go to the physician. He claims that this all has educational value that in time would work great advantage to public and physician alike. (Some of the doctors were hard-boiled enough to think that a few deaths from smallpox among cultists were of vastly more educational value and in the end would be instrumental in saving many more lives; morbidity would be reduced, and the public would be enlightened and ultimately benefited.)

3. He seemed to think treatment of simple skin diseases by school nurses necessary as the only practical means of handling the situation. Recommendation or giving out of cards of physicians is not countenanced by the department, he states.

4. He seems to think his "diagnosticians" superior to general practitioners.

It is the general opinion of the physicians of this community that the above methods and activities are detrimental to both the public and the physician and tend toward state medicine. The health officer pooh-poohs the fear of state medicine. He also says that the public is demanding such activities and will have them; if not at the hands of the health department then from the department stores, etc. The former, in his opinion, is better.

*He thinks the medical profession will have to accept them whether they like it or not.*

Now the medical profession in this section are as willing as ever to give free service to the worthy poor, but do not care to run free clinics for the rich in opposition or otherwise to the county health department. I take it from your writings that the problems here are by no means unique, hence I write for suggestions and ask the following questions:

1. Would educational advertising in the daily press signed by the members of the local society or sponsored by the society be looked upon with disfavor, or as unethical by the state society of the American Medical Association?

2. Would educational personal letters written to a physician's clientele be unethical? As for instance, during our epidemic of smallpox a letter might be written to our clientele stating the existence of a virulent epidemic of smallpox, the advantages of vaccination, possibly including some statistics.

I can see some possible dangers in such activities, but please give us some advice as to what we are going to do.

Faternally yours,

C. MAX ANDERSON, M. D.

The following from an experienced medical writer is pleasing compensation for hours of the most difficult part of editorial work:

"Thank you for your letter which I have just received along with my manuscript. I am very glad to have your comments and suggestions, and will make several alterations and omissions. I always appreciate constructive criticism that is based on an unbiased survey of any particular subject. Frequently it is difficult for an essayist to retain a proper perspective of his subject, being lost rather in a maze encountered by the labor required to accumulate and sift and criticize the material and then incorporate it into a paper. Hence the very great benefit that one derives from the opinions of another."

Madera, California, May 6, 1926.

Dr. Emma W. Pope, Secretary—CALIFORNIA AND WESTERN MEDICINE is a fine publication, and a credit, thanks to you.

You ask us to say how we liked the binding of the last issue. I like it very much indeed. It is in keeping with the material inside and out.

MARY RYERSON BUTIN.

San Rafael, California, May 5, 1926.

Dear Editor—I hereby thank you for giving me the opportunity, by contributing to Bedside Medicine for Bedside Doctors, to add my small share to the success of our magazine. Those most instructive opinions of the rank and file of the profession in the solution of their various problems are of the greatest value, and I am sure will be greatly appreciated.

J. H. KUSER, M. D.

**The Oldest Medical Work in the World**—This is the Egyptian papyrus written by a Nile physician 3500 years ago, detailing the methods to be pursued in dealing with fractured bones and head injuries. Forty-eight hypothetical cases are described by the ancient physician and treatment prescribed. Dr. James F. Breasted, the Egyptologist, said that the author showed a knowledge of brain functions which was not rediscovered until the present century. In the forty-eight prescriptions by this medical man, only once does he depart from science or common sense in favor of magic. The New York Historical Society has recently announced its plan for publishing this work.—New York Medical Week.

Perhaps the chief risk to which a so-called group system exposes itself is a failure to place responsibility on anything that is tangible. Groups melt like a mirage if things go wrong, and a patient with a wholly justifiable complaint may end up begging somebody's pardon for satisfaction.—Hugh Auchincloss, Journal A. M. A.

## CALIFORNIA BOARD OF MEDICAL EXAMINERS

Items of Interest by C. B. Pinkham, M. D.,  
Secretary-Treasurer

According to the Los Angeles Examiner of March 20, 1926, Miss Rena Amato has brought suit against Dr. W. E. Balsinger for leaving her nose in "a painful and disfigured condition" following an operation. However, Doctor Balsinger has answered by stating that whatever damage may have been done to her nose was due to her failure to return for further treatment as instructed.

The Los Angeles Herald of April 3, 1926, relates that Margery Fleming, who recently brought suit for \$50,000 against W. E. Balsinger, plastic surgeon, for alleged disfiguring scars following an operation, had lost her suit.

An Associated Press dispatch dated Sacramento, March 20, relates that according to James Compton of the State Board of Chiropractic Examiners, eighty-two chiropractors have forfeited their licenses to practice in California as a result of failure to pay their license fee.

"Dr." Wilbur LeRoy Cosper, some time since convicted of violation of the Medical Practice Act, who lost his recent appeal, has decided to serve his ninety-day sentence and pay the \$500 fine imposed following his conviction, according to the Oakland Times of April 29, 1926, which further relates that "testimony showed that he conducted the clinic of a score of his cult followers following the period of childbirth, and several witnesses testified that hilarity accompanied his administrations. . . . Prior to his conviction here, Cosper had attracted considerable attention in Oakland, where he conducted boxing bouts at his church. . . ." CALIFORNIA AND WESTERN MEDICINE in a prior issue has published the activities of "Bishop" LeRoy Cosper and his "Christian Philosophical Institute."

Mrs. Hjalmar de Danville, whose custom it is to dress in man's clothes, was found guilty of a charge of violation of the state Medical Practice Act in Superior Judge Harold Louderback's court, and was given a sentence of one year on probation today.—San Francisco Call, April 4, 1926.

According to the St. Louis, Missouri, Star of March 26, 1926, Dr. Elihu Fluesmeir, a graduate of the University of Missouri, and for the past thirty years a country doctor at Wright City, "was found guilty of embezzling \$16,000 from his widowed mother-in-law, and his punishment fixed at two years in the penitentiary at Jefferson City."

According to the San Francisco Chronicle of March 31, R. Thompson Fowler of Oakland is again charged with a violation of the Medical Practice Act, and the case has been set for trial June 15 in the court of Superior Judge E. S. Church.

The San Francisco Chronicle of March 27, 1926, relates that Harry G. Henderson, special agent of the Board of Medical Examiners, had brought suit for \$25,000 against Fong Wong, Oakland herb doctor, as the result of a charge which Wong caused to be inserted in the papers, conveying the meaning that Henderson had committed subordination of perjury on the occasion of Fong Wong's trial in Oakland on a charge of violation of the Medical Practice Act.

Walter J. Hendricks (Heinrichs), alleged doctor in Los Angeles, who is stated to have maintained offices in a drug store at Ninth and San Pedro streets, is reported to have been recently arrested by the state pharmacy inspectors on the charge of prescribing morphine without being a duly licensed physician, according to the Los Angeles Examiner of April 29, 1926, which further relates "Doctor Hendricks is declared to have written scores of prescriptions, and the drug store in question is said to have filled them. Police said it was the same drug company that filled a prescription several months ago that is declared to have caused the death of a baby."

According to the St. Louis Star of April 8, 1926, Dr. Ray B. Horton, who was prominently mentioned in connection with the diploma mill exposé, has lost his fight to restrain the Missouri board from hearing a citation to show cause why Horton's license should not be revoked, and the board heard the case on May 6, 1926.

Dr. Lewis T. A. Hotten, founder of the Charity-Anti-



Cancer League, was sentenced to two years in the federal penitentiary by United States Judge Henning yesterday. Hotten was accused of selling narcotics illegally, and his trial was one of the most sensational in the annals of the court here.—Los Angeles Illustrated Daily News, March 30, 1926.

A press clipping dated Washington, D. C., April 12, 1926, relates that the "United States Supreme Court today affirmed a Missouri State Supreme Court decision upholding the State Board of Health in suspending Leon Hurwitz, a licensed physician, from the practice of medicine in the state for fifteen years on a charge of performing an illegal operation." The California certificate of Leon Hurwitz was revoked after legal hearing on February 11, 1925, on the basis of conviction of violation of the federal narcotic law.

The San Francisco Call of May 8, 1926, printed a press dispatch dated Oskaloosa, Iowa, May 8, relating "James W. MacLennan, 38, president of Oskaloosa College, arrested Thursday by federal officers as the center of an alleged 'diploma mill' was found dead in a gas-filled basement hallway of his home today. . . ." During the investigation of the activities of the so-called national diploma mill, a number of credentials were found issued in the name of Oskaloosa College.

According to the Los Angeles Examiner of April 15, 1926, W. Roy Graham of Alhambra "was arrested yesterday charged with fraud, embezzlement and grand larceny, and lodged in the county jail on a complaint issued by the district attorney's office. The 'doctor,' whose claims to the title are believed fictitious and based merely on the fact that he is a corn doctor, is alleged to have defrauded Mr. and Mrs. Meek, 104 Las Tunas Street, Alhambra, out of \$10,000. In the complaint he is charged with forty-two counts of grand larceny and embezzlement. According to the records of the district attorney's office, Graham was twice convicted of practicing medicine without a license. "Special Agent Carter of the Board of Medical Examiners some time since reported W. Roy Graham as using a serum showing the list price to be \$38, which he injected; that following Graham's plea of guilty to violation of the Medical Practice Act and payment of a \$200 fine, "Graham cheerfully admitted to the undersigned that his serum treatment was the bunk. . . ."

A press dispatch dated Sacramento, April 19, relates that Governor Richardson appointed Lester Daniels, D. O., Sacramento, and W. W. Vanderburgh, D. O., San Francisco, to succeed themselves as members of the Board of Osteopathic Examiners. Albert Victor Kalt, D. O., Pasadena, was named as a new member, vice Harry W. Forbes, D. O., resigned. More recent information states that Henry F. Miles, D. O., has been appointed, vice Norman F. Sprague, D. O.

The Los Angeles Herald of April 13 relates that Dr. D. Z. Levin, a physician, has brought suit for \$50,000 against Thomas Deasy, whom he charges with having beaten him without provocation. The records of the Board of Medical Examiners show no physician by the name of D. Z. Levin licensed in this state.

Frederick King Lord, M. D., of Ceres, California, whose license to practice in this state was suspended for one year at the March, 1926, meeting, has appealed to the Superior Court of Los Angeles for a writ of review.

The Los Angeles Examiner of April 27, 1926, relates that Jules M. Marton, inventor of a method of removing hair, won the first round in the \$175,000 damage suit brought against him by George Scott, a motion picture appliance manufacturer, who alleges he took a "permanent shave" from Marton, and that his face was badly burned. The records of the Board of Medical Examiners show that Jules Marton pleaded guilty to a violation of the Medical Practice Act in Los Angeles on November 19, 1924, and paid a fine of \$100. A report relates that "in 1921 Jules M. Marton, who calls himself 'Consulting Chemist,' was advertising in Chicago papers that he could remove hair permanently with his 'Epilax-Ray' . . . that he sold franchises permitting others to use his methods in the eastern cities, for which he was to receive 25 per cent royalty."

Edgar Orlando Miller, also known as Orlando Edgar Miller, who has been given some prominence in the press

of California, was recently given publicity in the Tulsa (Oklahoma) World of February 23, 1926, the article stating that Miller delivered discourses on "The Fine Art of Living" and that collections to defray expenses incident to hall rentals were taken at the meetings, while literature published by the "International Psychological Society of which Miller claims to be president is sold at meetings as an additional means of revenue." The article further relates that Dr. Donald A. Laird, head of the Psychological Laboratory of Colgate University and editor of a monthly magazine, "Industrial Psychology," had stated "bona fide psychologists look upon Miller as a mountebank who probably does more harm than good. He is certainly not qualified as a psychologist, and is not a member of any recognized psychological association or of the American Association for the Advancement of Science." In 1922 press dispatches related that Orlando E. Miller of Los Angeles, president and promoter of the Remilio Film Syndicate, had been ordered by the State Corporation Department to return to stockholders on their demand, money that had been raised for the enterprise, and a report from the Los Angeles Better Business Bureau estimated \$640,000 would be returned to stockholders.

Recent press dispatches relate the arrest of Jacob L. Owen, M. D., on a charge of violating the State Poison Law, it being alleged that he sold to a local narcotic agent, without the formality of a physical examination, forty-eight one-quarter grains of morphine. Later reports relate that "Doctor Owen was fined \$100 and his narcotic permit revoked as a result of testimony by police officers who told of making a purchase of twelve grains of morphine through a prescription written by the physician." Doctor Owen has been cited to appear before the Board of Medical Examiners at the coming July meeting to show cause why his license to practice in the state of California should not be revoked on the basis of the above violation.

Percy Purviance, dean of the Berkeley College of Chiropractic, is still keeping active his quarrel with the Board of Chiropractic Examiners. According to a press dispatch from the San Francisco Chronicle of March 25, 1926, he had a controversy with Chief Deputy District Attorney T. H. De Lappe of Contra Costa County when he "sought warrants for the arrest of A. B. Hinkley and other Richmond chiropractors on the ground that they had practiced illegally between the time that they had applied for their state licenses and the time the licenses were granted. . . ."

Recent articles in the San Francisco papers relate that the police are looking for "Dr." John W. Ramsey, who for a time occupied the position of resident physician at the St. Francis Hospital, one article relating that Ramsey was said to have recently purchased an expensive automobile and was said to have obtained approximately \$6000 from colleagues on the hospital staff during recent months. Reports relate "Dr." Ramsey claimed to be a graduate of Washington University, St. Louis, 1908, but it is reported by said institution that the only individual by a similar name is Abdul Aziz Ramzy, who graduated in 1910, and in 1913 was alleged to be in Egypt; that there are only two other physicians by the name of John W. Ramsey, one of whom graduated from the University of Louisville School of Medicine in 1907, formerly a resident of Whitesville, Georgia, present address unknown, and the other named John Walter Ramsey, a graduate of Beaumont Hospital Medical College, St. Louis, Missouri, 1889, and a resident of Tilsit, Missouri.

The Los Angeles Times of March 24, 1926, relates that Dr. Fred K. Strasser, Hemet physician, has been held to answer to the Federal Grand Jury in Los Angeles to a charge of sale and possession of narcotics. "He maintained there was no evidence of sale and the federal officer had no right to arrest him when the narcotics were found in his professional office. The prosecution countered with the allegation that the narcotics found did not bear the federal stamp, this lack constituting a violation of the Harrison Narcotic Act. . . ."

The Glendale News of April 9, 1926, relates that the case of Dr. John Welborn, 1136 East Colorado Street, Pasadena, will be called before Police Judge F. H. Lowe this afternoon, he being charged with practicing chiro-

practice without a license. John Welborn is a licensed physician and surgeon.

The Los Angeles Examiner of March 26, 1926, relates: "Naming Dr. Thomas C. Williams, manager of the General Hospital at Vallejo as a member of the gigantic bandit ring with whom he himself was formerly connected, Herbert Wilson, ex-minister and mail robber, yesterday hurled a veritable bombshell while testifying in the court of Federal Judge James." The records of the Board of Medical Examiners do not show anyone by the name of Thomas C. Williams as licensed to practice in the state of California.

A recent interesting report from Los Angeles was made by a young lady who alleged she had been the principal in a fake beauty operation in which a well-known plastic surgeon "made up" her nose to look deformed and with a "movie" camera grinding away, went through a mock operation, this operation being proven a huge success in the "before" and "after" pictures by substituting a girl with a beautiful profile who had never been operated on, but who was chosen to pose for the "after" part of the picture.

A recent circular has been mailed to the chiropractors and drugless practitioners, appealing to them to use Bower's Health Foods, "Normallettes," accompanying the advertisement with a legal opinion to the effect that the use of "Normallettes" is not a violation of the limitation of the drugless practitioner certificate, nor of the chiropractic certificate. The circular further relates the various ailments for which "Normallettes" are to be prescribed. It is reported these "Normallettes" are sold by an individual in Long Beach who recently interviewed the special agent of the Board of Medical Examiners in Los Angeles in regard to the "sale of certain herb remedies" which he proposed to manufacture.

Rollie Jamison, who formerly operated the "Suggestive Therapeutic Clinic" in Los Angeles, was recently charged with violation of the Medical Practice Act, according to a report received from Special Agent Carter, complaint being based upon a charge by a young lady patient who related that Jamison insisted on her disrobing and being subjected to a physical examination as a part of his treatment. Reports relate the office door of Jamison shows the sign "R. N. Jamison, President I. S. S. A., Incorporated, Analytical Psychologist," it being related that the I. S. S. A. is not yet incorporated in California, but that the papers are ready for filing.

W. P. Seibert recently pleaded guilty in Los Angeles to a charge of violation of the Medical Practice Act and was sentenced to sixty days in the county jail, sentence suspended for a period of two years' according to a report from Special Agent Carter, who further relates that "Seibert holds a diploma from the Oriental University, Washington, D. C., dated June 8, 1916, conferring upon him the degree of 'Doctor Juris.' Seibert also holds a diploma from the Los Angeles College of Chiropractic, dated June 19, 1925, but according to latest reports is not licensed under the Chiropractic Board. The San Francisco Examiner of January 10, 1926, relates that "Bishop" Helmuth P. Holler, convicted of operating a fake diploma mill in connection with the Oriental University (Washington, D. C.) today was sentenced to two years in the penitentiary and fined \$1000."

Culver R. Spencer recently pleaded guilty to a violation of the Medical Practice Act in Los Angeles and was sentenced to serve sixty days in the county jail, said sentence suspended for a period of two years, according to a report from Special Agent Carter of the Board of Medical Examiners, who further relates that Spencer recently came here from Denver, Colorado, where he stated he practiced for eight years without a license.

Special Agent Carter reports the recent arrest of Masaki Tanimoto for violation of the Medical Practice Act in Los Angeles, where he is known among the Japanese as a "bone-setter." Tanimoto is recently alleged to have treated a broken leg of a little Japanese girl, with the result that the x-ray picture is said to have shown an overlapping of one inch, with resultant shortening, it being further alleged that the father of the little girl paid M. Tanimoto \$150 of the \$300 fee for treatment.

## M. O. R. C.

They didn't raise their boy to be a soldier;  
They much preferred to raise him as a pet,  
They didn't want him taught  
How these naughty wars are fought,  
And the using of a gun and bayonet.

They figure if you never talked of warfare,  
Abolished patriotic songs complete,  
And have histories redone,  
Ousting Yorktown and Bull Run,  
He would think that wars are something people eat.

If the army and navy were unmentioned,  
Just ignoring that they ever did exist,  
All the uniforms eschewed,  
Brass bands utterly tabooed,  
Then he'd certainly grow up a pacifist.

So he lived a life of peaceful vegetation  
On a ladylike, inconsequential plan,  
Full of happiness and joy,  
Mamma's perfect little boy  
Till the guns commenced to shoot and war began.  
—Detroit Saturday Night.

Other matters pertaining to this department are held for publication in subsequent issues because of lack of space incident to the annual sessions of the state medical associations.

## FUTURE MEDICAL MEETINGS

All Western medical and health agency organizations are invited to keep California and Western Medicine supplied with the dates, name and address of executive officer of coming meetings for insertion in this directory.

American Medical Association, Olin West, Chicago, Secretary and General Manager, —, Washington, D. C.

California Medical Association, Emma W. Pope, Balboa Building, Secretary, —, Los Angeles.

Nevada Medical Association, Horace J. Brown, Reno, Secretary, September 24-25, Reno, Nevada.

Utah Medical Association, Frank B. Steele, Salt Lake City, Secretary, —.

Pacific Coast Surgical Association, Edgar L. Gilcreest, San Francisco, Secretary, February, 1927, Del Monte.

Pacific Northwest Medical Association, Frederick Eppelen, Spokane, Secretary, July 1-3, Spokane.

Pacific Coast Oto-Ophthalmological Society, Kaspar Pischel, San Francisco, President, —.

Northern California Medical Association, John D. Lawson, Woodland, Secretary, —.

California Association of Physiotherapists, Miss Mabel Penfield, 560 Sutter Street, San Francisco, Secretary, —.

Southern California Medical Association, C. T. Sturgeon, 1136 West Sixth Street, Los Angeles, Secretary, —.

California Association of Medical Social Workers, Mrs. Sophie Mersing, Mount Zion Hospital, San Francisco, Secretary, —.

Medical Women's National Association, Lena K. Sadler, 533 Diversey Parkway, Chicago, Secretary, —.

California State Nurses' Association, Mrs. J. H. Taylor, 74 New Montgomery Street, San Francisco, Secretary, June 28 to July 2, Long Beach, California.

American Association for the Advancement of Science, Pacific Division, W. W. Sargent, Secretary Mills College, June 16-19, 1926.

In the attempt to correlate the life of a child to present-day social, educational, and economic conditions, it should be remembered that the physical and mental evolution of the race has been a slow process, while the social and economic conditions now facing us have descended like an avalanche during the last half century. This great difference in rates of progress between heredity and environment has produced conditions requiring long and careful study for their satisfactory adjustment.—The Nation's Health, April, 1926.

Probably no one but has had patients who have come from some institution where every conceivable medical analysis has been carried out without clearing a problem requiring only time, ordinary knowledge and common sense to solve. Just as true is it that institutes and groups may thrive on the errors of omission and commission of the individual.—Hugh Auchincloss, Journal A. M. A.



# Index—California and Western Medicine

## Volume XXIV, January to June, 1926

CALIFORNIA AND WESTERN MEDICINE has grown to a size where it is no longer possible to bind the twelve issues of one year in the same volume. Therefore, beginning with this year, there will be two volumes a year, one covering the six issues from January to June, inclusive, and the other from July to December, inclusive. Volumes will be numbered serially as heretofore, and each volume will be supplied with an index.

In preparing the index to this volume, we have followed the method of an alphabetical subject and author index combined. It is not as full perhaps as it should be, because it would take most of the time of an indexing secretary to prepare as complete an index as we would like to see. However, it is full enough so that any major subject discussed during the year, and the names of all authors, may be readily located.

An ever-enlarging circle of physicians who read systematically are finding the Cumulative Index published quarterly by the A. M. A., and sold for a nominal subscription, of incalculable value. Everything published in CALIFORNIA AND WESTERN MEDICINE, as well as all other worthwhile medical magazines, is completely indexed in the "Cumulative" in a most complete author and subject index. Our editorial staff use this volume constantly.—EDITOR.

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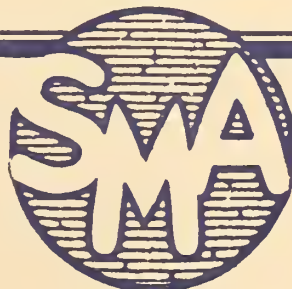
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